



NORMAN J. COLMAN, EDITOR AND PUBLISHER,
97 Chesnut street, St. Louis, Mo.

A. GUNTER, PUBLISHER, 99 Third St.
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97 Chesnut street, St. Louis, Mo.

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99 Third street, Louisville, Ky.

ASPECT FOR WINTER WHEAT.

Our readers are now preparing their ground for wheat. We have a few words to say about the aspect for this crop.

It has been found almost necessary, to successfully raise fruit in this climate, to choose a northern aspect. If a southern aspect is chosen, the warm sun of winter swells the buds and puts the sap in motion prematurely, and the freezing which ensues destroys the buds or blossoms and ruptures the sap vessels, and finally ruins the tree: while trees on a northern aspect are not thus affected—they blossom later and the sap is put in circulation at a later period, and they are generally uninjured and produce an annual crop of fruit.

Reasoning from analogy, we are led to believe that a northern slope or aspect is as desirable for wheat as fruit. Our wheat crop is generally destroyed in winter by the effect of the sun in the daytime and the freezing at night-time.—The plants are thawed out during the day, and

frozen out during the night: the drying winds then finish their vitality. Of course this thawing and freezing goes on in a greater degree on a southern slope than on a northern one. If a northern slope is selected, the sun has much less power—there must be but little thawing, and consequently the crop can be but little, if at all injured. We consider this a subject of very great importance to wheat growers, and hope they will choose a northern aspect, if not on a very extensive scale, that they may test the value of our theory on this subject.

Fine Timothy—Army Worm, &c.

"A friend has presented us with about a dozen heads of Timothy, measuring ten and a half inches each. They were gathered at a single grasp from the meadow of John D. Kern, a short distance below the big field. The grass seed was sown last fall, and it is a singular fact that the army worm has not entered a single field where the seed was then sown. On the other hand, scarcely has an old meadow escaped destruction."

We take the above from the *St. Genevieve Plaindealer*, for the purpose of establishing a fact for which we contend; though, of course, we do not say it is conclusive on the point.

We believe that the eggs are deposited the summer and fall previous to the season of their appearance; while some contend that the insect remains in the ground over winter and emerges in the spring, depositing her eggs, which immediately hatch. If this were the case, the eggs would be deposited on new meadows as well as old, for the moth flies from field to field and deposits her eggs in every suitable place she finds. In the spring the young Timothy, oats, &c., are as high as the meadow grass, and offer just as good places for the deposit of the eggs; and we

have no doubt that if the eggs were deposited in the spring, young Timothy and all spring sown crops would be as productive of the worm as old meadows. But as the eggs are deposited the previous season, on and near the surface of the ground, all the ground plowed or turned over buries the eggs so deeply that they cannot hatch, and consequently not in a single instance have we heard of the appearance of the worms in young Timothy or in any spring crop. Now, if the chrysalis remained in the ground over winter, plowing the ground would not destroy all—it might some of them—but it would make but little difference whether the chrysalis were turned down a little deeper or not—it would emerge just as well in the spring.

But another fact, it seems to us, must establish our position. If the worm does remain in the ground over winter as a chrysalis, the ground must be literally full of them, and not a furrow could be turned over without exposing thousands of them. Now did any one in plowing old meadows the last spring, see the ground full of these pupæ? We think that more observation will demonstrate that it is the eggs that are preserved over winter, and not the pupæ.

Wheat—How Much Seed per Acre.

A correspondent requests us to state what quantity of seed wheat per acre will afford the greatest yield. This is rather a hard question to determine, as the product depends upon so many contingencies:

First, the strength and quality of the soil; the manner of its preparation, whether more or less thorough; the variety of wheat to be sown; and, last, whether it is sown broadcast or put in with a drill.

Numerous experiments have been made both in this country and in England, with a view to determine this question. In some of these experiments, seed placed at a uniform distance apart, at the rate of four bushels per acre, yielded seventy bushels per acre; while a smaller quantity gave a proportionally less yield.—These experiments determine the question for their particular locations. In most of these experiments land of good quality is chosen, and it is well and thoroughly prepared. These experiments establish one important fact, viz:—That good land thoroughly prepared, and the seed equally distributed, say four bushels sown per acre, will give the greatest yield; but where the land is not so good, and less thoroughly prepared, less seed will be required, and a less crop will be harvested. Upon ordinary wheat

land, well prepared in the usual manner by deep plowing, rolling and harrowing, from one and a half to two bushels of seed per acre seems to be near the right quantity.

In a good fall, on good land well prepared, with $1\frac{1}{2}$ bushels of seed sown per acre, the plants may be expected to tiller so as to nearly cover the ground, and would likely give as great a yield as a larger quantity.

If a well constructed drill is used, on land free from obstructions and made fine, one and a half bushels would more than equal the larger quantity when sown broadcast; because when sown upon the surface and covered with the harrow, a considerable portion of the seed remains on or near the surface, and does not vegetate, and is liable to be picked up by the birds, and even that which vegetates is more liable to winter killing and other casualties than that which is put in with the drill. The drill places the seed at nearly a uniform depth, and the rows at equal distances apart. This secures the certain and uniform vegetation of the seed, and the drill leaves the ground in such a state that the plants are somewhat protected from the effects of freezing and thawing in winter.

It is well known that some varieties of wheat have a tendency to tiller or spread more than others. The season of sowing, too, has much to do with the crop in this respect. If sown early, and the fall be favorable, the plants spread well; but if sown just before the fall frosts set in, the plants do not get well established, and our springs afford less favorable opportunity for the spread of the plants.

Taking the whole subject into consideration, we would advise, on well prepared land to sow as early in September as the condition of the ground will admit, applying $1\frac{1}{2}$ bushels of seed to the acre if sown broadcast, and if put in with the drill $1\frac{1}{2}$ bushels per acre. This, for general practice, we regard as near correct as any rule that we can give.

MEASURING A HAY MOW.—I have just measured and weighed a mow of hay. It was two-thirds clover, and one-third Timothy, coarse and rather ripe when cut. It then got wet in the cock, was spread, and got very dry, then pitched into the mow with a horse-fork. I think it does not pack quite as close for that, and after the mow was settled it was 10 feet deep (no pressure on the top). Size of mow, 12 by 26 feet, and 10 feet deep—equals 3,120 cubic feet, which divided by 5.68 (number of tons), is equal to 549 cubic feet for a ton.—[W.P. Oswego, N.Y.]

[Written for the Valley Farmer.]

CHEMISTRY FOR FARMERS.**MANURES.**

Different manures are adapted to different soils and crops. Light, sandy and gravelly soils, require well-decomposed manure; whilst for heavy, clayey soils, the less decomposed the better; for in this state it tends to render the mold porous, and pervious to the influence of air and light. Again cold manures, such as those got from the cow and hog, are better suited for crops that are a long time coming to maturity, such as potatoes, cabbages, &c.; and those that are of a more stimulating nature for all such crops as require forcing in the early stages of their growth, as turnips, beets and celery, for example. Many a field of turnips has been destroyed by the fly, for want of our farmers paying the necessary attention to this circumstance. This crop, to thrive well, ought to be laid down with an abundant supply of stable manure in a well advanced stage of decomposition; or if this cannot be procured in sufficient quantity, and the soil is rich enough to grow them without it, a slight sprinkling of salt, bone-dust, or guano, should be strewn in the furrow in which the seed is to be deposited, to start the plant into rough leaf, when all danger from the destructive ravages of the insect is obviated. An excellent top-dressing for this purpose consists of a mixture of night-soil, and wood-ashes broken fine and sifted. I have made a mixture of salt, wood-ashes and lime sparingly used, with chamber lye and water, left to stand for three or four days, and applied in a liquid state to turnips that have been eaten down so that scarce a vestige of them could be seen, and with remarkable effect.

Soils are, for the most part, composed of four substances, viz: clay, sand, lime and aluminum; and the soil acquires its distinctive characteristics according as the one or the other of these ingredients predominates. Thus we have all grades of soils, from the light, sandy and gravelly hill, that absorbs the rain as fast as it falls—to the stiff, argillaceous clay, which retains it until evaporated under the gradual operation of the sun's rays, and which is good for the manufacture of earthenware, but absolutely unfit for cultivation.

A soil cannot be productive if any one of these ingredients constitutes more than nineteen parts in twenty of its entire bulk. It may have been excellent originally; but may have become exhausted by being made to produce through successive years the same crop. Mead-

ows sometimes fail on account of all the potash having been carried off with the hay: and who is there that does not know that the cereals are more liable to lodge and partially fail when cultivated on heavy clays, than when raised on land containing much sand? This is due to the fact, that the stalk and husk of these plants contain much silic, which is necessary to impart the strength requisite to support the weight of the head. In those cases the most efficient remedy is found in the judicious application of manures.

Some manures do not require to be decomposed artificially—sea-weed, lime and salt for example; their constituents are separated through the agency of the heat generated in the soil, with sufficient facility. Others, again, are worse than useless—absolutely pernicious—unless partially decomposed before they are applied: such are straw, weeds, &c. These are usually prepared by bedding cattle with them and afterwards allowing them to lie in a pile in the farm-yard to ferment. During the process of fermentation many of their most valuable ingredients are apt to be dissipated; hence, the sooner they are plowed into the land after they have arrived at a certain stage of putrefaction, the better; for the less disorganized they are before being applied, the more permanent, though the less rapid, will be their effect.

If the temperature of farm-yard manure is higher than one hundred degrees of Fahrenheit, we may conclude that the process of decay is proceeding too rapidly. This can be ascertained by dipping paper in spirits of salts and holding it over the heap. If it emits fumes having a pungent and acrid smell, resembling that of smelling salts, measures should be immediately taken to moderate its energy. Of these the best certainly is to cart it over the fields and to plow it in without delay; but if from any cause this be impracticable, it may be turned over, sprinkling a small proportion of powdered gypsum (plaster of Paris) among the layers, or vegetable mold may be thrown over it, to the depth of from nine to twelve inches. The gypsum has the effect of fixing the ammonia by entering into chemical combination with it, forming a neutral salt, and the mold absorbs it.

The impression seems rather prevalent that suggestions regarding the manuring of the soil in this great Valley of the Mississippi, are merely so many words thrown away; but we cannot think so. We have heard it said, "Men will not manure whatever you may say; yea,

though you preach to them till the crack of doom." "Between the virgin soil of this new country and that of the old nations of Europe, or even of the Eastern States, there is no comparison"—with many other such fine speeches. Yet at the same time we have seen stable dung hauled out of our cities frequently to a distance of seven or eight miles into the country, clearly demonstrating that the necessity for it in some districts is already beginning to be felt, and its utility to be appreciated; and we will venture the assertion, in full confidence, that the experience of every farmer, who will try it, will bear us out, that it will be found far more economical to pay due attention to the accumulation and preservation of the fertilizing substances whose materials are at their very doors, and subject to constant waste, than it will be to procure extraneous supplies at such an enormous sacrifice of time and labor. At all events, we may be permitted to claim the right of persisting in our adherence to the maxim, that "The best way to impress a great truth on the minds of the people, is to keep constantly repeating it."

P. P.

ROTATION OF CROPS.

GALENA, ILL. July, 1861.

ED. VALLEY FARMER: My friend, Mr. Henry, has sent me a number of your journal, in which I see two articles taken notice of, which are of great value to the farmer, viz: Red Clover and Manure. How any farmer can do without using both on worn-out land, together with plaster of Paris, is more than I can tell. No farmer of common sense would persist in a succession of crops or grass on the same ground for a number of years. No land should be allowed to become grain sick or clover sick by a continued succession of crops. Clover seed should be sown in March, on wheat, rye or oats. Next spring the clover should be sown over with half a bushel of plaster per acre. If designed for pasture, turn no stock on it until it is coming in bloom; if for hay, cut the first crop when the blossom begins to turn brown—let the second crop stand for seed, which will ripen about September. Let the ground lay in clover two years; the following spring break it up for corn, to be succeeded the next spring with oats, and as soon as the oats come off, haul out all your manure on the stubble; plow it under immediately, and in the fall sow it with wheat. When the wheat crop is taken off, break up the stubble and sow rye; harrow it in, and leave the ground level for mowing; sow clover seed the next spring.—

Thus you secure a rotation of crops, and good ones, with less labor than by any other mode: besides, your land will improve and become richer and produce larger crops.

OLD PENN. FARMER.

DEW—WHAT CAUSES IT!

Dew, the humidity of the air deposited on surfaces with which it comes in contact. The atmosphere always contains within it more or less aqueous vapor in an invisible form. The vapor appears to be dissolved in it, as salt is held dissolved in clear sea water; and as the capacity of a fluid to hold salts in solution depends commonly on its temperature, so does that of the air to retain vapor. If the temperature be depressed the vapor begins to appear.—When a body of warm air strikes the summit of a cold mountain, the moisture is precipitated in the form of rain. Partially cooled, it takes the form of mist or fog, and floats in a dense cloud in the low places where the soil is warmer than the air. A current of warm air dissolves the vapor, and the fog "lifts." Dew is the vapor of the air, extracted by the greater chilliness of the surfaces upon which the moisture is deposited. It may be made to separate from the apparently dry air of a warm room, by placing in it a pitcher of cold water. The air in contact with the pitcher sheds its moisture, which collects in minute drops, and more is added from adjoining strata of air, so long as the temperature of the pitcher is kept sufficiently below that of the room. The degree of temperature to which the air must be reduced for it to begin to deposit its moisture, is called the dew point.—It varies with the greater or less quantity of moisture which the atmosphere happens to contain for its actual temperature. If it has just been deprived of a considerable proportion, and has acquired a higher temperature, it must be reduced to as great a degree of cold as before to part with any more moisture; but if already saturated with as much moisture as it can contain at its temperature, any chilliness being induced will cause its precipitation to commence. Dew is not, therefore, as it has been generally described by poets, a shower "which falls like gentle rain from heaven." Almost universally its nature has been misconceived. Horace speaks of *rores pluvii*; Virgil says, *rorantia vidimus astra*; and Pliny, *cum ros cecidisset*; and our common form of expression at this day speaks of the dew drops. Aristotle alone appears to have conceived its true nature, when he describes it as the moisture separated from the cold air. Mysteriously appearing upon the blades of grass, and refreshing the vegetation in climates where rain rarely if ever falls, and gathering upon the herbage in sparkling beads, while it avoided the barren and rocky surface, the simple peasant might well look upon it as a special blessing sent like manna direct from heaven, and possessed of wonderful virtues, far transcending those of other crystal waters however pure. Hence it came to be prescribed for restoring to the features the fresh charms of

youth, and by the alchemists to be used in their processes as a solvent of subtle and mysterious powers. And when, at the close of life, the ancient patriarch confers his blessing in the words: "God give thee of the dew of heaven," the simple dew drop seems to typify all heaven's choicest gifts. The phenomena attending the production of dew were imperfectly comprehended previous to the researches of Dr. Wells, and the publication in 1814 of his essay upon the subject. This treatise, pronounced by Dr. Thomson to be "one of the most beautiful examples of inductive reasoning in the English language," presents in clear form the various phenomena, as observed by him for two successive years in the vicinity of London. The observations are criticized by Sir John Leslie for want of address and delicacy in the experiments, and omission to make use of the hygrometer and pyroscope; and he expresses much regret that Dr. Wells should have sought to explain the production of the cold by the aid of the "very loose, cumbrous and visionary hypothesis of M. Prevost of Geneva, concerning what is gratuitously called radiant heat." According to Prof. Leslie, the low temperature of the bodies upon which the dew collects is induced by the descent of cold air, which is precipitated in distinct pulsations, determined by the application of the ætheriscope, by which their intensity also is measured. Two requisites are essential, it appears, for the abundant precipitation of dew; one is the saturation of the atmosphere with moisture, and the other a chilled surface to condense it. The atmosphere is likely to contain the most moisture for its temperature after rains, when the air is cooled, and abundant evaporation is going on from objects upon the surface, and through the pores of the soil. This evaporation tends to chill the surfaces, from which it is taking place, and the blades of grass and all shrubs and light bodies near the ground assume a much lower temperature than that of the air above them. Dr. Wells states that this difference of temperature between the grass and the air four feet above the ground amounts in clear and still nights to 8° or 9° , and in one instance he observed a difference of 14° ; but in cloudy nights the grass was sometimes as warm as the air. Bodies of a filamentous structure, like cotton, flax, hair, silk, gossamer, &c., and of a downy nature, as swan's down especially, are particularly subject to be thus affected, and the deposit of dew first takes place upon them. Each growing plant has its own peculiar power of condensing moisture, which is no doubt proportioned to its requirements of this refreshing agent. When the rays of the sun cease to strike directly upon the surface, the dew-gathering objects soon manifest the want of that temperature which during the heat of the day had kept them above the dew point. If no wind is stirring to mix the air and produce uniformity of temperature, the blades of grass may exhibit moisture upon their surface before the sun has reached the horizon, and soon after having passed it drops are likely to collect. If it be a cool night of spring or autumn, succeeding a hot day, the deposition of

dew is likely to increase as the night becomes colder; and in the latter half more is precipitated than in the early part of the night. Should clouds gather, the process ceases, these seeming to reflect the heat that radiates from the surface, and turn it back, so that the requisite difference of temperature between the surface and the air can no longer exist. Any other overshadowing object, as a tree or a bush, has the same effect as the cloud; and the gardener, fearing that when the dew is changed to hoar frost the results of this radiation may reach upon the plants the freezing temperature, throws over them a thin sheet or mat, which retains the radiating heat as it is retained by a cloud. Numerous observations have been made upon the relative capacity of metals and other substances to receive dew. It is probable that they may be arranged in the same order as that which would represent the relative rapidity at which they would be cooled down when exposed under a clear sky. This rate of cooling would evidently vary in the same substance according to its structure and the smoothness or roughness of its surface. Twigs and bushes change their temperature much more rapidly than the same material would in a solid block. The polished surfaces of metals receive less dew than other substances; and bodies laid upon them lose in part their capacity for receiving this deposit by reason of the contact. Probably the worst conductors of heat as a general rule, other circumstances of texture, smoothness, &c. being the same, receive the most dew. It is deposited freely upon glass. The electrical condition of these objects has no influence upon their collecting dew. The quantity of dew which has gathered in a single night has been so great, that it could be determined by the rain gauge. Dr. Dalton estimates the amount precipitated annually in England, to be five inches. In some countries it is so copiously produced, that the want of rains such as fall in other regions is not seriously felt by the vegetation. Along portions of the western coast of both North and South America rain clouds are rarely seen in many years; the Cordilleras have stripped the air passing over them in the trade winds of nearly all its moisture, and the pleasantly cool and clear nights along the Pacific coast are particularly favorable for the deposition of dew. In the dry regions of Palestine, according to Maundrell, the dew gathering upon the tents wets them as if it had rained all night. The great deserts alone receive no moisture by rains or by dews. Their heated surface presents no cool object to arrest any vapor that may pass over it; and the fall of the temperature of this surface can rarely reach a point at which the little moisture contained in the air above could be so condensed as to saturate it. The vapors of the Mediterranean may be swept by the Etesian winds over the sandy plains of Sahara, but the clouds are no sooner touched by the burning rays reflected from these than they disappear like the morning mists before the rising sun.—[*New American Cyclopedia*, 1858.]

SUCCESSION CROPS.

These are very common with the gardener, but are rarely attempted by the farmer. In well-managed vegetable gardens we frequently see one, two, three, and sometimes even four crops taken from the same piece of land in a single season.

Thus the gardener gets more money from eight or ten acres than many farmers from a hundred or more. He will have lettuce and radishes succeeded by cabbage, planting them in alternate rows, and the cabbage followed by carrots or some other root crop. He will have potatoes followed by late cabbage or corn, peas followed by turnips or some other root crop.—But the routine farmer is very well satisfied if he get one fair crop in a season from his land.

We have no doubt that it is entirely practicable for our farmers to get two crops from most of their cultivated fields, and that this course would pay a much larger profit than the present system. Pastures, of course, can only yield grass. But the meadows, if only made rich enough, will just as readily yield two crops as one.—There is hardly an acre of fair meadow land cutting now from one to two tons of hay to the acre, that cannot be brought up by top-dressings to produce three tons of hay at the first cutting, and one ton at the second cutting, or its equivalent in good rich pasturage.

The difference in the annual profit of such an acre is worth looking at. The acre now produces two tons of hay, worth above the cost of production say twenty dollars. The same acre if it be made to produce four tons, gives forty dollars, with only the additional cost of manure and the second cutting. It costs not far from three dollars a ton to cut grass with a scythe and put it in the barn. With a mowing machine and all the improved tools for haying, hay can be put in the barn, under favorable circumstances, for two dollars and less per ton.

With a convenient deposit of peat or muck, we think a good compost—the equivalent of barn-yard manure—can be made and spread for one dollar a cord. Suppose it takes ten cords annually to produce the four tons of hay, we should have then the extra yield of two tons, secured by an outlay of thirteen dollars at the most, and a clear profit of seven dollars upon each acre so treated. This, upon fifty acres of mowing, would make a difference of one hundred tons in the yield of hay, and of \$350 in the clear profit of the farm. If this hay were all fed out upon the farm, it would furnish manure enough to keep the farm up to this high standard of productiveness.

If an early variety of potatoes are planted April 1st, like the Carpenter's or Wendell's Seedling, they can all be dug in the month of July. After the last hoeing, or about the middle of June, we may plant a variety of succession crops, according to our wants, without interfering with the potatoes. Beans will mature perfectly. Cabbage plants may be set out, or carrots may be sown.

We raised carrots in this way last season, at the rate of over a thousand bushels to the acre. Corn for fodder may also be raised in this way very cheaply. Open a furrow with the plow, sow the seed, and cover with the plow, manuring with superphosphate or some concentrated fertilizer in the drill. The potatoes will have attained their growth before the corn is high enough to shade them. The corn can be cut and cured the first or second week in September, and, under favorable circumstances, we can get at least four tons of dry fodder, worth quite as much as good English hay.

This succession crop is of great advantage, as it secures the farmer completely against short pasture in dry seasons. The corn will be large enough to furnish cuttings by the first of August, and can be fed out green if the season makes it necessary. We think forty dollars is a moderate estimate of the value of such fodder. It will cost to produce it, say ten dollars' worth of manure, and as much more for labor. This would make a profit of twenty dollars extra upon the succession crop. If the succession crop were carrots, the labor would be increased, and the crop in rich soil would be worth more.

Even with corn we may have a valuable succession crop. At the last hoeing, in July, sow turnips, working the seed in with the cultivator, if it be used, and with the hoe, and using about three hundred pounds of superphosphate of lime to the acre, unless the land has had high manuring in the spring. In the shade of the corn the seed will come up and the young plants get well established.

The corn will be ready to cut up by the roots about the middle of September, when the turnips will have the ground for about two months, or until there is danger of their being frozen in. From two to four hundred bushels of turnips to the acre may be gathered in this way at very small cost. We have raised two hundred on land that yielded sixty bushels of corn to the acre, without extra manure.

We might specify other succession crops, but if the farmer once gets in the way of raising them, he will readily learn the best succession

for his peculiar circumstances. Those who are near a good market for vegetables, will find cabbages and winter squashes a good succession for potatoes. Some of our shore farmers, near the sea coast, raise onions for a first crop and follow with carrots. The onions are sown early, and the carrots in alternate drills, about the middle of June. The onions come off in August, and the carrots have the ground.

It will be seen that by these succession crops the farmer gets double the profits nearly, from the same surface of land. It would seem at first glance that it required a much larger capital to carry out this plan; but this difference is rather apparent than real. The capital is put in a different place. The routine farmer has the most of his invested in land, where it does not pay him two per cent. interest. The other invests his in only half the quantity of land, and the rest in manure, tools and labor, with a view to make his real estate productive. If an acre cost him forty dollars, he lays out forty more, and gets ten per cent. on the eighty, instead of laying out ten grudgingly, and getting four per cent. on the fifty.

To make succession crops profitable, we must have more manure. The soil that is capable of producing only forty bushels of corn to the acre ought not to be taxed with a second crop, unless it have help. With plenty of manure we may take two crops annually, and get a much larger interest on our capital, while we keep the farm constantly improving. When all crops are likely to rule high, it is a favorable time to invest largely in manure, and make the soil yield all it will.—[Connecticut Homestead.

THE SOIL BREATHES.

Certainly it does, just as truly as you do. A few years since, if one asserted that trees had lungs and breathed, he would have been held to an argument to prove it; just as a few years earlier nobody would have believed that a fish's gills, and the leaves of a tree, and the lungs of a beast, all performed the same office, that of aerating the blood or sap.

The soil breathes. How does it breathe? Its circulating fluid, the blood of the soil, is water; this comes to it from the air, and is already aerated. True, but this soon loses its gases by contact with the soil, just as the arterial blood fresh from the lungs, loses its oxygen when passing its circuit in all parts of the body. The blood comes back to the lungs for more oxygen, but the blood of the soil cannot do this, so we must let the air in, to come in contact with it. We cannot here explain the working of the air in the soil, but would thus briefly enforce the necessity of stirring the soil during drouths as deeply as practicable, not to interfere with the

roots of growing plants, and those of previous culture, so that a deep and light soil shall invite a free circulation of air beneath the surface. Hot air, the moment it presses beneath the surface, becomes very moist, from the water which it originally contained, and it deposits it, thus not only aerating the soil, but adding to its moisture. Cold air can hold but little moisture, but hot air dissolves an immense quantity, which it deposits when it cools, or on cool surfaces. Who has not noticed of a winter's day, a locomotive leaving behind it a snowy cloud of vapor, like a comet's tail, often floating for a minute after the train has passed? Think of this, and watch the steam car on days when the hot breath just as full of water as in winter, is puffed out into the eye of the sun, and not steam enough shows to make a shadow, it is so quickly absorbed by the air.

BOOK-KEEPING FOR FARMERS.

In early life, before I became a farmer, I served an apprenticeship of six years as an accountant in a commercial house in one of our Atlantic cities. Into the vocation of a farmer I brought my habits as an accountant, and devised a simple form of book-keeping adapted to that occupation, which, finding it to answer the purpose well, I have ever since used. As I have often been applied to by young and inexperienced farmers for an outline of accounts suited to their business, and as the present is a time calling loudly for economy, I have thought that perhaps an essay as brief as the subject may admit might be acceptable.

With the aid of accounts, a farmer can at any time call into intelligent array all the facts of his business, which otherwise no memory, however tenacious, can treasure up; and thus the important fact, whether he is successful or not, as well as the measure of that success, may at any time be ascertained.

A farmer requires only two books—a Ledger and Memorandum Book. One book may be conveniently used for both. In that case commence at each end of the book and write towards its middle.

In the Ledger the first page should be reserved for an index, which need not be alphabetical. The first account may be an account of Promissory Notes given and received opened on a double page, thus:

ACCOUNT OF PROMISSORY NOTES.	ACCOUNT OF PAYMENT THEREOF.
1861.	1861.
Jan. 1, John Brown, note for \$60, payable 6 mos. after date, with int., due July 1.	July 1, Rec'd prin. \$60.00 do. int. 1.80 \$61.80
Jan. 10, My note in favor of Jos. Smith for \$40, payable 3 mos. from date, with int., due April 10.	April 10, Paid prin. \$40.00 do. int. .00 \$40.00

The next account may be an account of all cash paid or received, and may be kept on double or single pages, at the accountant's op-

tion. Cash is regarded as a person, and is charged with all moneys received, and credited with all moneys paid. Every three or six months this account should be balanced, and if correctly kept, the balance of the account will exactly agree with the money on hand. This account is often evidence of the payment of small debts of which there is no other record. If one's expenses are too nearly approximating, or going beyond one's income, the place of retrenchment may here be sought for. I give a specimen on double pages:

DR. CASH RECEIVED.	CASH PAID.	CR.
1861.	1861.	
Jan. 1, To am't of cash on hand, \$150.00	Mar. 1, By Robert Merry, as per acct on file, \$120.00	
Feb. 2, To Jas. Steele, for 100 bushels of wheat, . . . \$115.00	Apr. 10, By Jas. Smith, as per promissory note acct, page 1, 40.60	
July 1, To Jno. Brown as per promissory note acct, page 1, 61.80	July 7, By Stephen James, for wages, on acct, 20.00	

Next in order are accounts with persons with whom we have dealings. They may be kept on single ledger pages, with a double ruled column for debtor and credit, thus:

JOHN BROWN.	CREDIT. DEBTOR.
1861.	
Jan. 1, To 50 lambs, at \$1 each, \$50.00	
Jan. 1, By his note, payable in 6 mos., as per promissory note acct, page 1, \$50.00	

A farmer may, if he chooses to do so, open an account with each corn crop, or field, or with his farm in general, or with any special investment in stock, or all of these. In that case, such accounts, as with persons, should be charged with all costs and expenses, and credited with all receipts.

The Memorandum Book is for records of every kind which do not appropriately belong to the Ledger. Charges against transient persons, with a margin for record of settlement; spaces sufficient for one year for the birth and fecundation of stock; a record of all contracts; the time earned and lost of domestics and laborers; details of harvests of all kinds; of planting trees; diary of farm work; notes of the weather; spaces for valuable receipts; the arrival and departure of visitors; records of some deaths and marriages; of sheep shearing; of mailing valuable letters; the purchase of stock with the age of the animals; about line fences; the yearly assessment of taxes; maps of fields and farm; when foddering begins and when it ends; when winter sets in; when the hogs were shut up to fat. In short, anything and everything of which the farmer desires to preserve a record. This book has often refreshed my own memory and that of others, relative to important transactions involving pecuniary gain or loss.

Once a year an account of stock should be made out and entered in this book, which should be a summary or condensed view of the farmer's affairs, and include all that belongs to the debt and credit sides of his standing with

the world. A yearly comparison of these annual accounts of stock will be very valuable and interesting, and may incite to that economy and thrift which are the foundations of success.—
[P. H. in *Rural New Yorker*.

IRRIGATION.

C. L. Kiersted, of Kingston, Ulster County, N.Y., in the Transactions of the New York State Agricultural Society for 1859, makes the following statement:

"I had about four acres, with a soil varying from two to six inches deep—the rock being bare in many places—lying on a slope or sloping both ways, with a small stream of water running from a swamp through the lowest part of the lot; the land was in grass, and produced about half a ton to the acre.

"I put upon it manure; it did no good. The grass when wet would grow, but would soon dry up and amount to mostly nothing. I took a team with a strong plow, plowed two furrows in different places so as to take the water from the stream over the highest land, and let the water out whenever I desired it. Attended to it twice a week, letting on and off in different parts of the lot. The result was about three tons of hay to the acre, cut early, and a large aftergrowth.

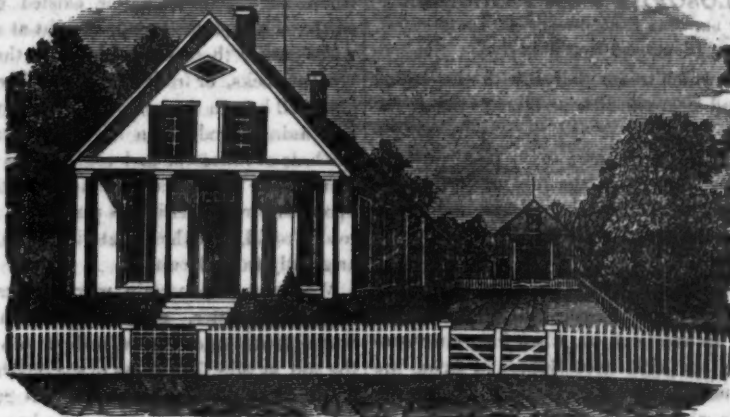
"The next year I took the water off; the result was less than half a crop.

"The year following, I let the water on as before, with the same good results.

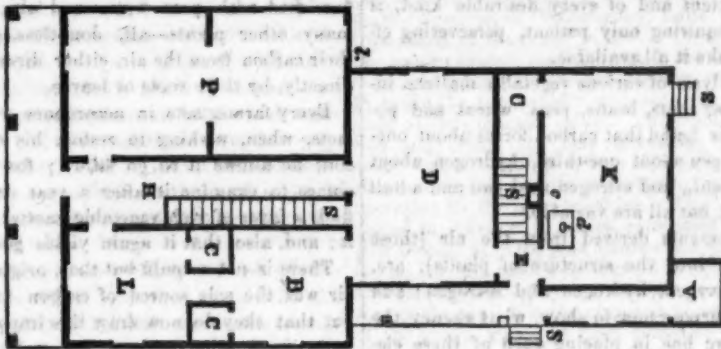
"I also had a piece of land—a coarse gravel; nothing but Johnswort grew upon it. There was a large spring directly above the lot, though the water ran, as is mostly the case from springs, in a channel directly across the lot. I went to work as before stated, and drew the water upon the land; the result was, red-top and herds-grass came, and grew so that it lodged.—Last year I mowed from one acre of ground 8530 lbs. of hay, timothy and white clover, made mostly by irrigation."

MARKET FAIRS.—The advantages of market fairs have been thus concisely stated, after a thorough examination of the system:

1. Greater convenience in buying, selling and exchanging.
2. Greater saving of time.
3. Cash for all things sold.
4. The removal of middle men or speculators, giving better prices to producers, and less expense to consumers.
5. The abolition of the peddling system.
6. More uniform knowledge of market prices.
7. Increase of social intercourse among farmers.
8. Increase of knowledge by comparison and experience.
9. Greater division of skilful and profitable agricultural labor.
10. Stimulus to higher culture and better products.
11. Bringing the remote farmers into competition with those nearer.
12. Greater facilities for employing laborers and transacting business generally.



PERSPECTIVE VIEW OF A FARM COTTAGE.



We here present our readers with an illustration of a cheap, commodious, and very neat farm cottage. The ground plan, it will be seen, is admirably arranged:

The reader will bear in mind that the dimensions of a house built on the foregoing plan, may vary in size, or may be constructed of bricks or stone, as may best suit the taste, ability, and wants of the occupant; but the position in regard to the sun, and the general arrangement may be the same. A dwelling of this kind, let it be remembered, is not designed for a city or village, where the buildings are prescribed in their limits, the architectural style of which, in order to break the monotony often observable in our larger towns, should be displayed in single and double cottages, neat and appropriate out-buildings, factories, churches and other public structures.

GROUND FLOOR.

H, denotes the front lobby or hall, 7 feet wide including the front stairs. P, a double parlor, 14x28 feet, with folding doors, commu-

nicating with the front lobby or hall. Either or both of these parlors might be used as sleeping apartments, should circumstances require. L, a room communicating with the front lobby or hall, 11x12 feet, with a closet 4 feet square, and may be used for a library, office, living room, or nursery, according to the taste or wants of the occupant. B, a bedroom, designed for the head of the family, 11x12 feet, with a closet 4 feet square, and communicating with the library and dining-room. D, the dining-room, 14x20 feet, communicating with the front lobby H, the back entry E, and the cellar at S. K, the kitchen, 12x20 feet, communicating with the dining-room by the back entry E, and a sliding window in the pantry C, with the wood-cellar at d, and the back-yard by the steps S. E, the back entry, 4x4 feet, communicating with the verandah by a passage under cover, 3 feet wide. C, C, C, closets, or pantries. S, S, S, S, stairways, or steps. c, kitchen and dining-room chimney. d, trap door, covering the wood cellar stairs. l, the lightning conductor.

[Written for the Valley Farmer.]

PHILOSOPHY FOR FARMERS.

BY DR. JOHN T. HODGEN, OF ST. LOUIS.

[Continued from July No.]

The air which to-day dallies with the fading flower, and bears its rich perfume as the sweetest breath of spring to the restless infant, exhausted by long disease; may, to-morrow, as the moving element of the furious storm, uproot the mightiest oak of the forest and hurl it headlong up the mountain side.

But for the agency of this mighty, moving element, this continent had not been discovered.

There is not an American heart that does not bound in an excess of joy, when its owner contemplates the rich boon bestowed upon the world of mankind by the discovery of this country; upon whose broad plains, in whose fertile valleys, and on whose mountains wealth to an untold extent and of every desirable kind, is stored, requiring only patient, persevering effort to make it all available.

On analysis of various vegetable matters, including hay, oats, beans, peas, wheat and potatoes, it is found that carbon forms about one-half, oxygen about one-third, hydrogen about five per cent., and nitrogen near two and a half per cent.; but all are variable.

The elements derived from the air (those that enter into the structure of plants), are, carbon, oxygen, hydrogen and nitrogen; and it is my purpose now to show, what agency the atmosphere has in placing each of these elements in a condition and position to be easily accessible to the vegetables that feed upon them.

As has already been mentioned, carbonic acid forms about one part in twenty-five hundred of atmospheric air, by bulk; and is furnished to the air by the volcanic fires deep hidden in the bowels of the earth; and by every fire-fly that flits in a still summer evening, like a miniature meteor through the darkness. It bubbles up with the sparkling waters of Saratoga; and it fills the low, stagnant valley in which grows the deadly Upas.

The fires that burn brightly, dispensing inward warmth, in defiance of the biting blasts of winter, give forth great volumes of carbonic acid; and even our bodies, in which are burning a thousand vital fires, all emit carbonic acid for the support of the vegetable world. All vegetable and animal decomposition gives forth carbonic acid—so that every moldering log, and leaf, and stick, is an agent for furnishing carbonic acid to the air.

It is a well-known fact, that there was a time when no vegetable matter existed upon the earth; when plants to gain weight at all, must needs gather their materials from the barren, igneous rocks, or from the atmosphere. It is also well known that since that time, vegetable and animal products in the fossil form, as in the beds of limestone and coal, and as peat and loam, have accumulated to an immense depth upon its surface, telling as plainly as a written record could, that these materials were gathered originally from the air.

We know that certain marls, containing no vegetable matter, produce abundant crops. Some plants, indeed, grow without contact with the soil at all. The moss of the South (that of which our mattresses are made) will grow, and increase rapidly in weight when hanging on a wall; bulbous flower roots will grow if only furnished with pure water and air; so also, many other plants—all, doubtless, gathering their carbon from the air, either directly or indirectly, by their roots or leaves.

Every farmer acts in accordance with these facts, when, wishing to restore his exhausted soil, he allows it to go fallow; for when he comes to examine it after a year or two, he finds a layer of rich vegetable matter covering it; and, also, that it again yields good crops.

There is not a doubt but that, originally, the air was the sole source of carbon to plants; but that they do now draw this important element from other sources, is equally certain; for if it were true that they found carbon only in the atmosphere surrounding them, they would grow as well without decomposing vegetable matter about their roots, as with it—yet they do not. The truth appears to be, that, primarily, the air furnished all the carbon, but now plants gather it through other sources independently of the air.

Carbonic acid is readily absorbed by, or dissolved in, water; and it is probable that it is only in this form that plants, by their roots, take it up; while by their leaves they gather it directly from the air, by the aid of the sunlight.

Water absorbs its own volume of carbonic acid gas as it falls through, or exists as vapor in the air; and whether it condenses on the earth as the crystal dew-drop, or falls as the dashing rain, the pelting hail, or the light and fleecy snow, it comes loaded with carbonic acid gas—the soil is saturated, and plants, by numberless spongioles, drink in the refreshing liquid. The vessels of the plants are thus filled

with the fresh formed blood, which, with a force equal in some instances to the pressure of 40 atmospheres, or 600 pounds to the square inch, rushes upward to the surface of the leaves, where the water is evaporated, the oxygen separated from the plant, and the carbon fixed in the solid parts, there to remain as an element of vegetable structure throughout the plant's whole existence.

But the decomposing vegetable matter of the soil yields carbonic acid. This like the other is dissolved in the water, and taken up by the roots.

A large proportion of the vegetable loam (*humus*) of our soil, is carbon—corresponding to pulverized charcoal. Now, this carbon has a very strong affinity for carbonic acid; for freshly burned charcoal will absorb 35 times its own volume of carbonic acid. This being constantly kept in contact with the water of the soil, secures to it perfect saturation with carbonic acid; ready to furnish the greatest possible quantity of carbon to the plants growing thereon: so that in fact here we find one mode by which vegetable mold acts as a fertilizer. Another way in which it is beneficial, is, that it absorbs moisture from the atmosphere, so that soils abounding in it do not suffer from drouth as other soils do.

Our best farmers say: "Keep your plows running in dry weather, and your crops will not suffer." And it is for this reason the freshly loosened soil absorbs carbonic acid from the atmosphere, and moisture too; and by keeping the soil light, both pass during the night so deep into the soil, that they are not dissipated by the next day's sun, but are absorbed by the roots, and go to nourish the plant.

We see, in the balance kept up by the animal kingdom on the one hand, and the vegetable on the other, another evidence of the wisdom that designed the majestic scheme that is being carried out in the physical world about us. Animals give off carbonic acid, plants consume it; animals die in its presence, plants feed upon it, and are nourished by it. If plants, like animals, gave off and did not consume carbonic acid, such a quantity would soon exist as would destroy not only animal but vegetable life: so that by the action of plants the great aerial ocean is robbed of those elements that must destroy animal life if allowed to accumulate in it, whilst by animal exhalation plants are nourished. Thus the atmosphere is kept balanced in its proper elements, and all goes on harmoniously and happily under a wisely balanced system that makes provision not only for man's

every want, but also takes care of all the animal and vegetable creation.

Thus it is, a continual balance is kept up; and the air is kept by vegetable absorption fit for the use of the animal kingdom; and by animal exhalation with the combusive changes of volcanic action, the vegetable kingdom is supplied with carbon for its growth.

TILE MACHINES.

The necessity of under-draining a considerable portion of the land in all our agricultural districts in order that farming may be more certain, has made it indispensable that machines should be invented for tile manufacture. It is now about twenty years since tile machines were first used in England, though under-draining has been practiced there for a much longer time. About five years ago, tile machines were introduced into Ohio, since which time nearly fifty machines have been put in operation in the State. Quite recently we had an opportunity of examining the Mattice & Penfield machine in operation; it is manufactured by J. W. Penfield, of Willoughby, Lake county; over thirty of them are in use in Ohio. With the improvements recently added, we are sure it will meet the wants of tile makers, who wish to make the tile rapidly and with the expenditure of little manual labor. The whole operation of grinding the clay; screening from it small stones, molding it into tile, and placing them on drying boards, is performed with one operation by the same machine. The labor required to drive it is easily performed by one pair of horses. One man throws the clay from the pit into the machine, where it is cut, ground and mixed thoroughly. A scraper on the bottom of the shaft fills the clay box at each turn of the sweep, which is then closed so that the plunger pushes all the clay through the dies, instead of a portion of it back into the hopper, as is usually the case. The screen removes all fine stone which will not pass through the dies, so as to render unnecessary a set of cylinders for crushing them. Instead of the tile being left on rollers, to be removed with a fork, they are left on the drying boards and one man removes these to the car on which they are left to dry. The same person also places the drying boards on the roller, so that only two men are required to work the machine; indeed, one man can work it alone, though not so rapidly. The wires for cutting the tile are on a movable frame, which can be so adjusted as to make it unnecessary to cut one or more inches of waste at each operation. The car on which the tile are dried is on wheels and a track, which brings it close to the delivery, so as to make it easy to place the tile on it. When full, it is run under the shed with ease. The number of tile which it is capable of making per day, of course, depends on the quality of the clay and the rapidity with which it is worked; no doubt, it is capable of making, when driven to its fullest capacity, at the rate of twelve thousand two-inch tile per day. At any rate, it will make enough to satisfy any reasonable manufacturer.



The Proper Method of Milking Cows.

BY C. L. FLINT.

The manner of milking exerts a more powerful and lasting influence on the productiveness of the cow than most farmers are aware of.—That a slow and careless milker soon dries up the best of cows, every practical farmer and dairyman knows; but a careful examination of the beautiful structure of the udder will serve further to explain the proper mode of milking, to obtain and keep up the largest yield. "The udder of a cow," says a writer in the *Rural Cyclopaedia*, "is a unique mass, composed of two symmetrical parts, simply united to each other by a cellular tissue, lax, and very abundant; and each of these parts comprises two divisions or quarters, which consist of many small granules, and are connected together by a compact laminous tissue; and from each quarter proceed systems of ducts, which form successive unions and confluences, somewhat in the manner of the many affluents of a large river, until they terminate in one grand excretory canal, which passes down through the elongated mamillary body called the teat. Its lactiferous or milk tubes, however, do not, as might be supposed, proceed exactly from smaller to larger ducts by a gradual and regular enlargement, because it would not have been proper that the secretion of milk should escape as it was formed; and therefore we find an apparatus adapted for the purpose of retaining it for a proper time. This apparatus is to be found both in the teat and in the internal construction of the udder. The teat resembles a funnel in shape, and somewhat in office; and it is possessed of a considerable degree of elasticity. It seems formed principally of the cutis, with some muscular fibres, and it is covered on the outside by cuticle, like every other part of the body; but the cuticle here not only covers the exterior, but also turns upwards, and lines the inside of the extremity of the teat, as far as it is contracted, and there terminates by a frilled edge, the rest of the interior of the teats and ducts being lined by mucous membrane. But as the udder in most animals is attached in a pendulous manner to the body, and as the weight of the column of fluid would press with a force which would, in every case, overcome the resistance of the contractions of the extremity, or prove oppressive to the teat, there is in the internal arrangement of the udder a provision made to obviate this difficulty. The various ducts, as they are united, do not become gradually enlarged so as to admit the

ready flow of milk in a continual stream to the teat, but are so arranged as to take off, in a great measure, the extreme pressure to which the teat would be otherwise exposed. Each main duct, as it enters into another, has a contraction produced, by which a kind of valvular apparatus is formed in such a manner as to become pouches or sacks, capable of containing the great body of the milk. In consequence of this arrangement, it is necessary that a kind of movement upwards, or lift, should be given to the udder before the teat is drawn, to force out the milk; and by this lift the milk is displaced from these pouches, and escapes into the teat, and is then easily squeezed out; while the contractions, or pouches, at the same time resist, in a certain degree, the return or reflux of the displaced milk."

The first requisite of a good milker is, of course, the utmost cleanliness. Without this, the milk is unendurable. The udder should, therefore, be carefully cleaned before the milking commences. The milker may begin gradually and gently, but should steadily increase the rapidity of the operation till the udder is emptied, using a pail sufficiently large to hold all, without the necessity of changing. Cows are very sensitive, and the pail cannot be changed, nor can the milker stop or rise during the process of milking, without leading the cow more or less to withhold her milk. The utmost care should be taken to strip to the last drop, and to do it rapidly, and not in a slow and negligent manner, which is sure to have its effect on the yield of the cow. If any milk is left, it is reabsorbed into the system or else becomes caked, and diminishes the tendency to secrete a full quantity afterwards. Milking as dry as possible is especially necessary with young cows with their first calf, as the mode of milking and the length of time to which they can be made to hold out, will have very much to do with their milking qualities as long as they live.

At the age of two or three years the milky glands have not become fully developed, and their largest development will depend very greatly upon the management after the first calf. Cows should have, therefore, the most milk-producing food; be treated with constant gentleness; never struck, or spoken to harshly, but coaxed and caressed; and in ninety-nine cases out of a hundred they will grow up gentle and quiet. But harshness is worse than useless. Nothing does so much to dry a cow up, especially a young cow.

The longer the young cow, with her first and second calf, can be made to hold out, the more surely will this habit be fixed upon her. Stop milking her four months before the next calf, and it will be difficult to make her hold out to within four or six weeks of the time of calving afterwards. Induce her, if possible, by moist and succulent food, and by careful milking, to hold out even up to the time of calving, if you desire to milk her so long, and this habit will be likely to be fixed upon her for life. But do not expect to obtain the full yield of a cow the first year after calving. Some of the very best cows are slow to develop their best qualities;

and no cow reaches her prime till the age of five or six years.

The extreme importance of care and attention to these points cannot be over estimated. The wild cows grazing on the plains of South America are said to give only about three or four quarts a day at the height of the flow; and many an owner of large herds in Texas, it is said, has too little milk for family use, and sometimes receives his supply of butter from the New York market. There is, therefore, a constant tendency to dry up in milch cows; and it must be guarded against with special care, till the habit of yielding a large quantity and yielding it long, becomes fixed in the young animal, when, with proper care, it may easily be kept up.

If gentle and mild treatment is observed and persevered in, the operation appears to be one of pleasure to the animal, as it undoubtedly is; but if an opposite course is pursued—if at every restless movement, caused perhaps by pressing a sore teat, the animal is harshly spoken to—she will be likely to learn to kick as a habit, and it will be difficult to overcome it ever afterwards. To induce quietness and readiness to give down the milk freely, it is better that the cow should be fed at milking time with cut feed, or roots, placed within her easy reach.

I have never practiced milking more than twice a day, because in spring and summer other farm work was too pressing to allow of it; but there is no doubt that for some weeks after calving, and in the height of the flow, the cows ought, if possible, to be milked regularly three times a day—at early morning, noon, and night. Every practical dairyman knows that cows thus milked give a larger quantity of milk than if milked only twice, though it may not be quite so rich; and in young cows, no doubt, it has a tendency to promote the development of the udder and milk veins. A frequent milking stimulates an increased secretion therefore, and ought never to be neglected in the milk dairy, either in the case of young cows or very large milkers, at the height of the flow, which will ordinarily be for two or three months after calving.

The charge of this branch of the dairy should generally be intrusted to women. They are more gentle and winning than men. The same person should milk the same cow regularly, and not change from one to another, unless there are special reasons for it.

There being a wide difference in the quality as well as in the quantity of milk of different cows, no dairyman should neglect to test the milk of each new addition to his dairy stock, whether it be an animal of his own raising or one brought from abroad. A lactometer is a very convenient instrument here; but any one can test the milk of each cow separately at first, and give it a fair and full trial, when the difference will be found to be great. Economy will dictate that the cows least adapted to the purpose should be disposed of, and their place supplied by better ones.

FOOD OF COWS AFTER CALVING.—It is customary with many farmers to feed cows imme-

diately after calving, with warm slops—a pail of bran or meal and warm water, well salted; and a better diet is commenced at once in order to get as much milk as possible. This is objected to by some as contrary to nature, and very likely to induce caked bag and milk fever; also that the cow should have rest and quiet. It is an error to suppose that tasking the stomach after the fatigue of parturition can be otherwise than hurtful. A drink of water and a little dry hay is enough for the first day, and she should have nothing better than the best hay for three or four days—until all inflammatory symptoms are past.

QUINCY IN HOGS.

ED. VALLEY FARMER: I have just lost, by death, four of my best breeding sows, by the throat swelling so large and full that they could not inhale air sufficient to support life, but choked to death. The disease seems to be infectious, for none of my herd caught it but those sleeping together. I have other hogs fed on the same food and receiving the same treatment, but none of them have taken it. The sow that took the sore throat first, was a Neapolitan, inclined to be fat; and she was fat at the time, and soon died. I have lost many Suffolks by this disease. This breed is very subject to death by suffocation from the swollen throat. The larger breeds are less subject to it.

Why hogs should have this disease at this season, I can't perceive. The weather is temperate; there are no extremes; no cold or wet to produce any such disease.

Now, Mr. Editor, my object in writing this article is to ask your readers who are raising hogs, if they can give any recipe for the cure of this disease.

The swelling is from the inside outward.—Bloody mucus matter forms and discharges. A lean, poor hog may get well, but fat ones do not.

The subject of disease in swine, horses, sheep and cattle, is a very important one to us who are raising stock; and if farmers, or others, have any remedies that they know are effectual for the cure of diseases, they would confer a great favor upon your readers if they would send their remedies to the *Valley Farmer* for publication.

Last winter I lost many hogs by the hog cholera, and now I am losing them by sore throat, and I see and sensibly feel the importance of understanding and knowing how to cure the diseases to which all kinds of stock are subject.

Hoping to hear from some of your readers,
I am, H. L. B.

Contraction of the Feet of Horses.

The tendency of a horse's feet, in a healthy condition, are to expand whenever the weight of the body is thrown upon them. Being a very complicated piece of mechanism, they are very easily disarranged, and once out of order are difficult of repair; hence the necessity of preserving them in a sound condition.

Contraction is caused—

1. By cutting away the bars of the feet, which are the main stays for the support of the quarters.

2. By (opening the heels as the smith calls it) cutting away a portion of the frog, in consequence of which the moisture of the frog becomes absorbed, loses its elasticity, and destroying its function, thus exposing the feet to injury by concussion.

3. By standing upon plank floors.

4. By improper shoeing.

An ordinary observer will, upon an examination of the common shoe, notice that it inclines from without inwards at the heels, thus forming a concavity for the feet to rest in; the consequence is a lateral resistance to the expansion of the hoofs, when the weight of the animal is thrown upon them. The effects of this resistance is to force the heels together, creating pressure upon the sensitive parts within the horny case; establishing fever by which the moisture of the hoofs is rapidly absorbed, rendering the hoofs hard, brittle, and liable to crack, and frequently causing corns, navicular joint lameness, bony deposits to be thrown out from the lateral wings or processes of the coffin bones, rendering the animal permanently lame or unsound. These are but few of the bad effects arising from contraction; enough, however, to serve our purpose at present.

REMEDY.

Preserve a level bearing by making the shoes perfectly flat on the quarters, so as not to interfere with the expansion of the feet. Should contraction already exist to a considerable extent, bevel the shoes slightly outward at the heels, in order to facilitate expansion. Care should be used not to bevel too much, or bulging of the lower part of the hoofs at the quarters will be the result. The shoes should in all cases be forged and not twisted, as is sometimes done to save trouble by the bungling smith.—Proper applications to soften the horny parts and promote elasticity, should also be used. Such preparations are put up in the form of hoof ointments.—[R. Jennings, V.S.]

BLOAT IN CATTLE.—H. D. Court, of Bedford, writes to the *Michigan Farmer*, that when cattle are bloated from eating wet clover, or horses from eating green clover, he has found a sure remedy in giving to the animal an ordinary charge of gunpowder, mixed with about the same quality of fine salt, in the hand, and thrown on the tongue every fifteen minutes, until two or three doses are given.

He says: "In the summer of 1858, I had five head taken at one time, two of which were severe cases; but this treatment saved them.—

The same week the hides of forty head were sent into Battle Creek, and all from animals that had been lost by eating wet clover."

Care of Breeding Mares.

ED. VALLEY FARMER: A good deal of information should be imparted to the public on the subject of the care of breeding mares. I have been raising colts for many years, and have learned by experience a good many things, which if I had been made acquainted with when I started in life, the knowledge would have been worth thousands of dollars to me. I have kept mares for breeding, and in one year had as many as six, which were served by one of the best stallions I could procure, not one of which had a colt; and now I am satisfied the cause was that I kept them upon a white clover pasture. I laid all the blame on the stallion, then; but now I lay it upon my own ignorance.

Of late I always keep my mares in the stable for three or four days after service, on dry food, and I hardly ever fail of getting a colt.

I am also careful for the first three weeks not to put my mares to severe work, or drive them fast, as I believe the foal is frequently lost when in the unformed or half formed state. Moderate exercise will do no harm, but overtaxing the mare in any respect is dangerous to the foal. Mares should also be kept away several days from geldings, after service, as they will tease them and thus frequently cause them to miscarry at this early stage.

I believe moderately regular exercise is beneficial to the mare and foal; but over exertion or abuse of any kind is highly prejudicial.—Regularity in feeding, watering and exercise, is important; so are healthy, well-lighted, well-ventilated stables. Mares should always be treated with the greatest kindness and gentleness—kicking, beating and abusing a breeding mare, is outrageous. I may, in future numbers of your valuable journal have more to say on the subject of horses.

HORSEMAN.

HORSE TAMING IN OLD TIMES.—A horse-breaker in "the good old times of Queen Beas," gives the following directions:

"If your horse does not stand still, or hesitates—then at rate with a terrible voyce; and beat him yourself with a good stick upon the head between his ears, and then stick him in the spurring pluce iii or iiiii times together, with one legge after another, as fast as your legges might walk; your legges must go like two bouching beetles."

Breaking Fast Trotting Horses.

ED. VALLEY FARMER: It appears to me that a subject of so much importance as this is sadly overlooked by our agricultural journals. I take several agricultural papers, and I find no directions for training horses to trot rapidly. Experience demonstrates that as much and more depends upon training than upon the horse. I know some gentlemen who always have fast trotters, who can, with almost every horse they purchase, so train them as to trot a mile in less than three minutes, and some of them considerably less.

Of course they purchase horses which are well made for speed, and step well, but they are by no means fast when purchased. They buy these horses at low prices, and the first we know these same horses have been sold for \$500, \$1000, or \$2000. Now, if the proper system of training horses to trot were promulgated, the farmer, who raises these horses, might just as well get these high prices as the person who has purchased them and put them up to their greatest speed.

I can see nothing wrong in publishing the method of training adopted by the most successful trainers. I am not recommending, bear in mind, the practice of betting on the speed of horses. No man condemns this in stronger terms than myself. Betting and gambling, in any degree, and on anything, is highly reprehensible and pernicious.

But the speed of a horse increases its value.—Gentlemen in our cities want fine horses and fast ones, and are willing to pay big prices for them. If, then, farmers can know how to develop the speed of their horses, and learn which can be made fast, so as to command a high price, I think it highly proper; and my object in this article is to ask those who have skill in training their horses to tell us in what that skill consists, and what method of training to pursue. Perhaps, however, those who have this skill are not willing to impart it. Some of your readers, I know, are skilful trainers, and we will see whether they are willing to tell us what they do to develop the greatest trotting speed of their horses. MISSOURI.

WATER FOR STOCK.—At this hot season of the year all animals need a large amount of cool, refreshing water. Those pastures not supplied with good water, should be as speedily as possible. Warm, stagnant, muddy water, is not what stock should have. If ponds are depended upon, they should be made deep, and shade trees should be planted around them to keep the water cool.

THE THUMPS IN HOGS.

As the treatment of the diseases incident to our domestic animals, is of much importance to the agriculturist, and all others owning this description of property, I wish to direct public attention to the use of *veratrum viride*, or green hellebore, for the cure of inflammatory cases.—The credit of introducing this remedy to the medical profession, is due to Dr. Norwood, who made its investigation a speciality. It has a specific, controlling influence upon the action of the heart and circulation, reducing it with certainty to any desirable standard; and hence, by taking off the force of the sanguineous circulation, relieves the over fullness and distension of the capillary vessels implicated in the local disease, and enables the recuperative powers of nature to effect a cure. It also, and with almost equal certainty, allays morbid or undue nervous excitability. This it does, perhaps, by a specific action upon the brain, although it is not strictly a narcotic.

I have not as yet used this remedy in very many cases; but in those in which I have given it, the effect has been entirely satisfactory: nay, really astonishing. In the "thumps" of hogs, it has proved so far entirely successful.—The "thumps," I believe, is a Western phrase, nothing more nor less, however, than Pneumonia or inflammation of the lungs, showing itself by gradual loss of appetite, cough and hurried respiration; the panting continues to increase until the muscles of the abdomen and thorax are far forward as the region of the heart, contract with each respiration with a jerk or thumping action—hence the name, thumps. This is a very fatal condition, and the animal also affected almost invariably dies.

I have lost many valuable pigs with this disease. The past fall I had a valuable lot of young hogs, weighing gross from 150 to 200 lbs. each, and from some cause they all contracted pneumonia. One case soon ran into thumps, and in the course of two days died. To this one I gave no treatment. The next began to thump badly. I put it into a separate pen, and gave ten drops of tincture of *veratrum viride*, mixed in a little milk, three times a day, and in a few days turned it out quite well. A third one also ran into the thumps very badly before I discovered it; so much so that I thought it could not possibly live. I gave it a chance, however, with fifteen drops of the tincture, three times a day, and in three days it was quite recovered.

So much for my experience with the hog, which I consider the most difficult animal to cure when much diseased. I would not hesitate to use this remedy in the inflammatory diseases of other animals. I have used it much in diseases of the human family, and have always found it safe and efficacious although powerful. The dose of the tincture for an adult is from two to six drops, repeated from three to six hours, according to circumstances and its effects. By this standard we may graduate the dose for our animals, Very Respectfully,

[Germantown Telegraph.] J. W. SALTER.

HORSE BARBERING

Nature provides for the calorific protection of the horse's body, on the approach of winter, by causing the growth of a thicker and larger coating of fur. But our modern horse dealers have discovered that this protection is a mistake, so far as active working animals are concerned, and was only intended for horses of leisure, that have nothing to do but crunch their fodder and frisk about among the geese and hens of the country barnyard.

It is alleged, and apparently with philosophical correctness, that a working-horse, covered with Nature's winter greatcoat, will sweat more easily, and is therefore more liable to injury by cold, foundering, &c. than if its hair were shorter, because the heavy coat retains the perspiration moisture for a long time, and prevents proper drying off. Accordingly the remedy is to clip the hair. This is a queer operation; and under the hands of an expert professor, the animal is transmogrified into "a horse of quite another color."

The clipping operation is commenced as soon as the winter hair is fairly grown. With a pair of slender scissors or shears, the barber carefully clips off the horse's covering as closely as the nature of the cutting instrument will allow.—But even the nicest shearing would necessarily leave some hairs longer than others, and the skin will present a jagged, uneven appearance. The next process, therefore, is to singe the horse, so as to burn off all stray, protruding hairs, and

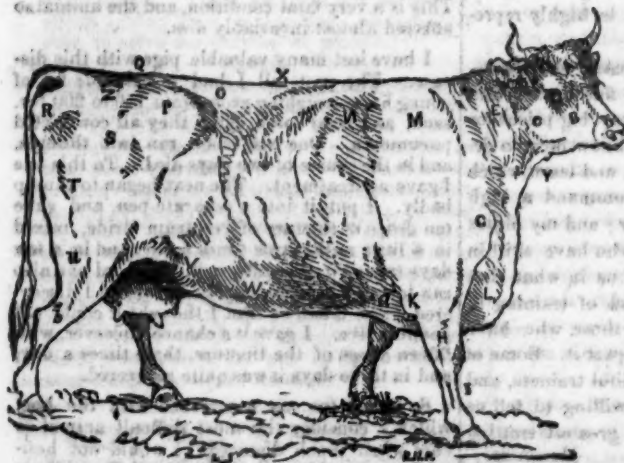
secure a smooth, uniform surface. For this purpose, a shallow, oblong lamp is used, with a long nich tube, so as to produce a broad flame that will singe a considerable width of the hair at once. The lamp is filled with alcohol. The operator holds a piece of tin plate in one hand, with which he lifts the points of the hair; the lamp carried in the other hand is then carefully brought up to the plate, and the hair evenly burned off. In this way the entire body of the animal is carefully gone over until the hair is all singed down to an even thickness.

After this several blankets are piled upon the horse, and a profuse sweat is produced. He is then thoroughly scraped down with a steel blade, which removes all dirt from the skin, with the loose hairs and singed ends. Thus finished off, the animal presents a sleek and natural sort of appearance.

The whole operation requires three days' time of a good workman, and, at the end of the process, we would hardly know the animal by its color, so great is the change produced. A shiny black horse is changed to mouse color; and in all cases, the outer coat being removed, it is the short undergrowth hair that becomes only visible. The clipping operation, well done, costs \$10. The horse thus treated, of course requires heavier blanketing when standing in the stable; three thick blankets being usually employed.—It is said that these clipped horses enjoy better health in winter, and will do more work, than if the above manipulations were not practiced.

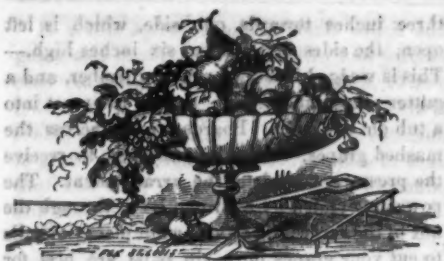
EXPLANATIONS.

- A. Forehead.
- B. Face.
- C. Cheek.
- D. Muzzle.
- E. Neck.
- F. Neck vein.
- G. Shoulder point.
- H. Arm.
- I. Shank.
- K. Elbow.
- L. Brisket, or breast.
- M. Shoulder.
- N. Crops.
- O. Loin.
- P. Hips, hooks, or huckles.
- Q. Crupper bone.
- R. Rump, or pin bone.
- S. Round bone, or whirl.
- T. Buttock.
- U. Thigh, or gaskit.
- V. Flank.
- W. Plates.
- X. Back, or chine.
- Y. Throat.
- Z. Hind quarter.
- a. Chest.
- b. Gambrel, or hook.



TERMS, DENOTING THE EXTERNAL PARTS OF CATTLE.

Every reader may not be familiar with the terms generally used to denote the external parts or points of neat cattle, and the above cut may be useful to such as are not well acquainted with the subject. In describing animals the same terms should be used by all, not only throughout the country, but there should be a uniformity throughout the reading world, then there will be no confusion. The publication of figured or lettered animals for this purpose, in books and agricultural papers, as standard objects, greatly tends to a uniformity so desirable; and it enables every one to use the appropriate terms when treating of animals.



HORTICULTURAL.

A Flying Visit Among Fruit Growers.

About the middle of June we made a call upon some of our patrons engaged in fruit culture. Our visit was short, and we write of what we saw from memory, as we neglected to take notes.

J. S. Seymour, Eureka, St. Louis County, was the first gentleman we called upon. He is cultivating the Lawton Blackberry to a greater extent than any one else in the county. He has several acres in cultivation, and the bushes are heavily laden with fruit. He will market a portion of the fruit, and manufacture wine from the balance. He thinks the Lawton Blackberry can be profitably cultivated for wine alone. He plants in rows 8 or 10 feet apart, and about 4 feet apart in the row; but lets the plants become thicker in the row when they come into bearing.

He is also cultivating to a considerable extent the strawberry and grape. Of the strawberries, Wilson's Albany surpasses all others for profitable culture, and he intends to grow no other variety. Of grapes, the Concord has proved itself superior to all others, and this will be the leading variety he will cultivate. He says the Concord will produce three pounds to the Diana, Isabella, and Catawba one pound, the second year after bearing. We are satisfied that the introduction of the Concord Grape in the South-West will prove to be of inestimable advantage to fruit growers. For hardiness, productiveness, and freedom from mildew and rot, it has as yet no equal. It also makes a most desirable wine, as has been proven by Mr. Geo. Humann, of Hermann.

Our next visit was to Mr. F. W. Braches, Gray's Summit, Franklin Co. Mo. Mr. B. has chosen a most excellent locality for raising fruit. The locality is very high, and peaches and other tender fruit are here produced every year. Mr. B. has cultivated with great success for many years, peaches, apples, pears, cherries,

and grapes. The Catawba is an old "stand-by" with him, and by careful culture, good attention, and close watching any decayed berries and removing them, and proper pruning, he has made its culture successful and profitable. He has not yet experimented as much with other varieties as we would like to see him, and think that when the Concord has been fully tried by him, it will prove in all respects more desirable. And we know so good an appreciator of the grape must be pleased also with the Delaware, and Taylor or Bullis.

Mr. B. is paying much attention to the culture of the Dwarf Pear. He has planted out many hundred the past spring, and is training them all on trellises. With the excellent attention which Mr. B. bestows upon all his fruit, we feel confident that dwarf pear culture will prove a source of profit and pleasure to him.

The Wilson's Albany Strawberry has so far surpassed all other varieties on his place (and he has tried a large number of them) that he will hereafter cultivate only the Albany.

We also visited Messrs. Humann & Manwaring, of Hermann, and found a great promise of fruit of all kinds this season. Their apple, peach and pear trees were all loaded with fruit. It has been contended by some that the pear could not be cultivated with profit; but these gentlemen have large annual crops which they always sell at high prices. Their trees are all standard. They have not tested dwarf pear culture yet, but we believe they planted out quite a number of dwarf pear trees this spring.

Messrs. H. & M. are paying much attention to grape culture. We believe they will have over sixty varieties in bearing this fall.

E. M. Avery, of Cherry Hill Farm, St. Louis County, has a fine fruit farm, about 10 miles south of St. Louis. There are about a thousand apple trees in bearing. The best and most profitable early variety Mr. A. finds to be the Red June; next on the list comes the Early Harvest. An early variety, which he calls the Early Ann, is also a meritorious apple, ripening with the Red June and Early Harvest—we are not acquainted with this variety. The Maiden's Blush succeeds admirably here, and is a productive and profitable apple. Mr. Avery planted 1000 Concord grapes this spring—very fine plants—and all are doing well. We think he will reap a rich harvest from them. Ripening as they do two or three weeks before the Catawba, they will come into market before it is glutted, and command a high price.

[Written for the Valley Farmer.]
Calendar of Operations in the Vineyard.

BY GEORGE HUBBARD.
 AUGUST.

As this is the month for the coloring and ripening of the earlier varieties of grapes, the vineyard will need close attention.

If your vines have been thoroughly summer pruned, the grapes will be well covered with young leaves, and but little tying will be needed. Should some bunches, however, be too much exposed, tie young shoots over them, as this is the month for sun scald. As this month is generally very dry, keep the ground mellow, and hill up to the vines slightly, either with the plow or hoe.

Birds will be very troublesome, especially on your early grapes. If you have but a few vines of an early variety, protect them by mosquito netting; it will be the easiest plan. For the general crop, there will be no other plan than to send a man or boy into the vineyard, to make all the noise he can and scare them off; for I will not suppose that you, gentle reader, are one of those bird-slaughtering, blood-thirsty men, who wage war constantly on these the best friends of the vine grower. Cherish and protect them on your place, and especially in the vineyard—they will destroy millions of insects: even if they do eat grapes, it is only their due for benefits conferred, which they take.

This will be the time for summer layering.—Lay the young shoots you wish to layer flat on the ground, or bend them down, and cover about an inch deep with mellow soil, leaving the tops out.

Get suitable casks in readiness to receive your must, if you intend to make wine. If you get new casks, such as will hold from 150 to 200 gallons are the most convenient size. Have them made of good, well-seasoned white-oak wood, and bound with strong iron hoops. Prepare everything for wine making next month. You need a good cool cellar—arched, if possible; a large tub, or vat, to receive your mashed grapes—this ought to be wide and low, to make it more convenient, with a faucet on one side to draw off the must; a press, of which there are many different kinds in use. One of the cheapest and most convenient kind is the following: An iron screw, three or four inches in diameter, is used, either in a strong upright frame, or coming up through the centre of the platform. A strong, tight, box platform, six or seven feet square, is made of strong plank which are grooved. It ought to slope two or

three inches towards one side, which is left open, the sides being about six inches high.—This is wedged in between heavy timber, and a gutter placed underneath, to lead the must into a tub on one side. Boards to lay across the mashed grapes, and oak scantlings to receive the pressure, complete the arrangement. The power is applied by a strong lever through the nut of the screw. You also want plenty of pails to cut your grapes into—tin pails are best for that purpose. If you have all these things prepared, you can rest easy until next month.

[Written for the Valley Farmer.]
HARDY CLIMBING PLANTS,
 THE HONEYSUCKLE.

BY CAREW SANDERS.

There is no class of plants which combines so many attractions as the climbing and twining ones; none so elegant and graceful in habit: and when to this is added the perfection of beauty in the form and colors of the flowers, together with unsurpassed fragrance, as in the case of the family of plants under consideration, we think the claim above set up for them is not too high.

Climbing plants, as is well known, depend upon other and stronger plants, as trees, &c. for their support, without which they would trail on the ground; but nature has provided them in various ways, with the means to embrace and cling to the nearest object within reach, which they often grasp and adhere to with the tenacity of life itself.

Some are furnished with delicate tendrils or strings, which are thrown forward and grasp the spray or twigs of other trees, and hold themselves as firmly and strong as with a tie of string. Of this class is the Grape Vine, Wistaria, and others. Others are provided with aerial rootlets, which clasp the trunks of trees, or surface of walls, with a hold so firm as not to be separated without tearing the parts: the English Ivy, and Virginia Creeper or American Ivy, are familiar examples of this. Whilst others, and a large number of them, climb by twining the main stem spirally around other bodies, as trunks of trees, poles, or anything that is within their reach. Of this class the Pole Bean, Hop Vine, Honeysuckle, and hosts of others, are familiar to every one. The Honeysuckle, indeed, being a woody perennial, is often seen to give the embrace of death to its victim, (twining round other stems so tightly that in its attempts to grow and enlarge it becomes strangled to death, the vital circulation being stopped.

It is this spiral climbing habit which adds grace and beauty to these plants; and whether seen reaching outwards and upwards, twining itself round, or grasping everything within its reach, or, having reached the top, it continues to grow, and hangs over in ample folds of beautiful and leafy drapery—it is alike charming and interesting.

No flower garden or shrubbery is quite complete without a few of these climbers, as they form a distinct feature, and should always be introduced in some way (of course in keeping with, and proportionate to, the size of the space devoted to flowers) either around the house, over the porch, on arbors and trellises, or up pillars. Any or all of these modes of training may be adopted.

Of hardy climbing plants, there are none longer or better, or perhaps more favorably known than the Honeysuckle, and none more desirable, or which possess in themselves more of the combined attractions above mentioned.—At once hardy, of easy culture, with a good variety of kinds, beautiful in bloom and deliciously fragrant, and old and common as it may be, it still deserves a place in every garden, however small. For the iron railings around the piazza, or over the porch, or arbor of city dwellings, it is well adapted; and equally well for a wider range, near the home of the wealthy in the country, as over the cottage porch of the laborer or artisan.

There are some forty or fifty species and varieties enumerated in some catalogues, but of these about half a dozen are the best, and sufficient to form a good variety both in color, habit, and season of blooming.

The botanical name of this family of plants was, formerly, *Caprifolium*, now called *Lonicera*, in honor of Lonicer, a German botanist of the 16th century. Its botanical classification is, Tribe 1, *Lonicera*; Order 52; *Caprifoliaceæ*.

The origin of its popular name Honeysuckle, we have no means of ascertaining, but can easily imagine that it took its rise in the time-honored practice of children in pulling out its tubes, biting off the ends and sucking out the nectar that is deposited in large quantities within. Children, and adults too, of both the old world and the new, will remember that, as one of their pleasant pastimes, when life was young and they had nothing to do but wander in the woods and fields among the grass and flowers.

The best varieties for cultivation are the following:

Lonicera Sempervirens (Trumpet Honeysuckle)

—The well known Scarlet Monthly; blooms all the summer, is very showy, but not fragrant.

Lonicera Aurea (Yellow Trumpet Honeysuckle)—Also well known. Both these are vigorous growers, free bloomers, of contrasting colors, similar habits, and are well adapted to plant in pairs, both for contrast and variety.

Lonicera Flexuosa (Chinese Twining)—Nearly or quite evergreen; dark green foliage; rapid, though slender grower; blooms twice a year; two tubes in a cluster, white inside, reddish out, changing to buff; exquisitely fragrant.

Lonicera Japonica (Japan White)—Similar in habit to the above; foliage light, glossy green; evergreen; flowers, pure white changing to yellow; very fragrant. These two also pair admirably, differing from and yet resembling each other in such a way as to form an agreeable contrast and desirable variety.

Lonicera Belgica (Monthly Fragrant, or Dutch,)
—Constantly in bloom; striped red and white; very sweet, and though not so striking in color or habit as some of the others, is still one of the very best garden varieties.

Lonicera Periclymenum (English Woodbine)
—Is a rapid, strong grower; flowers showy, red outside and buff within; very sweet.

Lonicera Pubescens (Hairy)—A very strong grower, with coarse, downy foliage, and close, heavy clusters of bright orange flowers; quite a desirable variety, but blooms only once.

The Dewberry, or Trailing Blackberry.

ED. VALLEY FARMER: Will some of your readers inform me through your journal whether the Dewberry can be cultivated successfully? I want facts in reference to this fruit, not suppositions. If any are cultivating it successfully, either for market or for family use, I wish to know who they are, that I may see the plants and learn something of their productiveness.—I have heard that they were cultivated, but have never seen any one who has cultivated them. My own impression is, that if cultivated (for instance, as the Lawton Blackberry,) they will produce a splendid growth of cane, but little or no fruit. But perhaps skilful and close pruning may be the means of effecting a growth of fruit.

It seems to me that if this plant can be made productive, it is a very valuable one. The fruit ripens about ten days earlier than the blackberry, which greatly enhances its value, either for family use or market purposes. There is, undoubtedly, a difference in the plants, some pro-

ducing heavy crops of large fruit, while other plants are unproductive, small and worthless.—I know of no field of enterprise for the fruit culturist brighter with promise than to obtain some of the most productive plants of the Dewberry; give them good and proper cultura, and then raise still better plants from seed, if possible, and thus add another to our list of cultivated fruits.

POMONA.

[Written for the Valley Farmer.]

Monthly Notes for the Garden and Orchard.

By Carey Sanders.

FOREIGN STRAWBERRIES.

Intelligent cultivators in all parts of the country, with few exceptions, have decided that all foreign varieties of strawberries are unworthy of general cultivation in our climate. From a limited experience, but with a distinct foreshadowing of what we may expect in the future, it would require but little persuasion to induce us to give our adhesion to the general verdict.

Lack of productiveness appears to be the great want with them, though they do not seem to attain that high flavor and large size that we know some of the best varieties do in their native country. True, we have not treated them according to the most approved methods, keeping down the runners and confining the bearing to single plants; but then, take it in this way, the Albany, treated in precisely the same manner—weeds kept down, ground loose, and runners allowed to grow the summer previous, and it is not too much to say, that it bore ten times as much fruit on a given space as any one out of nearly twenty of the best foreign kinds in repute.

All of them blossomed full; several had an extra large crop of blossoms; all were either hermaphrodite or staminate, yet some of them did not ripen a single berry—the others a small crop only of good sized, showy, firm fruit, with a waxy external appearance, and white flesh.—Of them all, we have as yet thought one variety only, worth extending (the Triomphe de Gand)—and that very doubtful. River's Eliza is a vigorous grower and quite late, a very moderate bearer, apparently. Of the rest, only the Victoria, Jucunda, Madame Vilmorin, Marquis Maubourg, and a few others, appeared to give any promise at all, and these very doubtful when compared with some of our best natives. We cannot recommend them, for they don't recommend themselves to us, and have no doubt they will be generally discarded.

We have fairly settled down to the Wilson's Albany as the very best for all purposes, and so

far ahead of all others that we scarcely care to notice them. True, it could doubtless be improved by taking away a little of its acid, but we can bear with that even, considering its other good qualities. Sugar and cream will neutralize its acid, and then there is left the delicious strawberry flavor in its perfection—give us the latter, if we do get a little vinegar with it, rather than some of the tasteless varieties that have neither one nor the other, and nothing but water in their composition.

The *ne plus ultra* of strawberries need not be considered to be attained until the best quality known, is added to the Albany; and then it will serve us, perhaps, for a quarter of a century, as Hovey's Seedling has done; and we doubt if it would be surpassed in that time, with all the appliances of modern improvement.

Peach Tree Borer—Boiling Water Fatal to the Tree.

ED. VALLEY FARMER: Various authorities have recommended boiling water to be applied to the collar of peach trees infested with the borer. Let a sufferer give a friendly caution in regard to this application. Last fall I applied boiling water to a number of thrifty three-year-old trees in my orchard. A few days afterwards an examination showed some signs of injury, the bark at the collar looking brown, and appearing soft and dead. As however the trees did not shrivel during winter and budded out finely in the spring, they were supposed to be uninjured. Finding that some borers had escaped the previous application, from being perhaps too high up to be reached by the water, or from the water not being hot enough, or from their holes being stopped up with gum so that the water could not reach them, I determined to make another application. The trees were half out in leaf. Several of them are now dead, and quite a number are unthrifty in appearance—clearly damaged by hot water. Four and five year old bearing trees treated in the same way do not seem to have suffered; though I am not sure that the want of vigor of some of them may not be owing to this cause. Mr. VanBuren's remedy of a small bag of salt (say a half pint) in the crotch of each tree, deserves consideration. If this fails me on trial, I shall hereafter eschew hot water and depend upon the knife. C. S. D.

A letter dated Milford, Bracken county, Ky., says: "There is a tree at Browningsville, in this county, that bore last year a fine crop of peaches, and it was full of peach blossoms this spring. Now it is full of plums, and not a peach upon it." [We say, nonsense!—Ed. V.F.]

Renovating Strawberry Beds.

Many persons do not know that strawberry beds need renewing. Indeed, we are often asked, "What is the matter with my strawberry bed? I used to have plenty of strawberries, but my bed has become entirely unproductive." Upon inquiry, we have generally found that the bed has been standing for several years without any renewal of plants. The plants have become so thick that they are choking one another, so that they cannot bear and can hardly live. Strawberries, like all other crops, should not be grown on the same ground for a long number of years. They exhaust the fertilizing elements in the soil, on which they feed, and with the best culture the strawberries will decrease in size and quantity unless the ground receives a liberal dressing of manure. Three or four years is long enough for a bed to stand, unless properly manured. Where, however, the bed has been standing and has become covered and choked with plants, no time should be lost in thinning it. Rows of plants about a foot wide may be left, and the rows three or four feet apart, and all the plants between the rows should be destroyed, and the ground deeply worked with the spade, and well pulverized.—The plants in the rows will throw out runners which will root in this stirred soil, and thus new and vigorous plants will be formed for bearing next year. If the plants could be kept a foot apart in all directions, the weeds eradicated, and the ground loose and moist by mulching, we believe the greatest yield would be obtained. If the ground is not mulched it should be kept loose by working with a hoe, being careful not to work too deep, as most of the roots lie near the surface. Depend upon it, if your ground is choked up with plants, they will not bear well. They must be thinned out and cultivated. The plants must become large and the crowns of the roots must have room to swell and increase in size, as the bearing properties of the plant are centered herein.

If you have some poor, unproductive variety, dispense with it as soon as possible. We would not advise you to purchase the improved varieties before next spring, as we have no faith in fall planting. Make your old bed give you what fruit it will next season, and then destroy it.—Early in the spring procure some well-known, thoroughly-tried varieties. Plant them in rows in the garden or field three or four feet apart, and from one to two feet apart in the row. Keep the ground free of weeds and well worked, and you will have an abundance of fruit.

The following kinds are all good and can be depended upon for large annual crops with as much certainty as corn or potatoes, and will yield more bushels per acre with good culture than either. The varieties we can recommend are: Wilson's Albany, Longworth's Prolific, McAvoy's Superior, Triomphe de Gand. The first named is more productive than any of the others, but the quality of the fruit from the others is superior to that from the Albany.—The Albany, however, adapts itself to all kinds of soil and location, which is not so much the case with the others. In this particular, as well as in its productiveness, Wilson's Albany stands without a rival. It is highly advisable to cover the plants in the winter with straw, corn-stalks, leaves, or something of the kind, to keep the plants from being heaved out by the constant thawing and freezing going on during the winter in this climate.

SINGULAR ESSAY ON THE GRAPE CULTURE.

There was published, not long ago, a curious essay by Mr. F. J. Cope, of Pennsylvania, entitled, "Physiography, in its Application to Grape Culture." As Mr. Cope takes new and startling ground in relation to this important subject, and as it is our duty to lay before our readers any new views with reference to it that may have been made public, we propose to state, in as brief terms as possible, the theory which Mr. Cope has enunciated. Leaving out, as of no particular moment, his preliminary observations, we proceed at once to the propositions in regard to the mode of cultivating the grape, which he undertakes to defend. They are three in number:

"First—We stimulate too freely.

"Second—We prune too much; and

"Third—The more we depart from the dictates of nature, the more rapid will be the ravages of disease, and the ultimate destruction of the cultivated fruits."

Having thus distinctly stated his propositions, Mr. Cope proceeds to quote from "Von Martius, a learned German author," as applicable to his first proposition, his reference to the fact, that although cultivation and civilization have improved the wild potatoe into the noble root which is now in common use, yet, in the act of improving it, a weakness of constitution has been fastened upon it, and the stimulus of too much culture is diminishing its powers. The argument, in our opinion, will scarcely hold good. If cultivation has changed the wild root into a most useful vegetable, altogether different in point of flavor and nutrition from what it originally was, surely the cultivation and stimulus applied in the way of manures and thorough tillage, were exactly what were wanted to develop its qualities.

Mr. Cope next contends that cultivation has

brought disease on our oldest and best varieties of apple, and refers to the Rambo, the Vandever, the Green and Yellow Pippin, and many others, as cases in point. But here we think his argument again falls short of the mark. It is not cultivation that has injured them, but the want of it—the exhaustion of the soil of those nutritive elements that are absolutely necessary to produce the apple in perfection; and, perhaps, to some extent, the habit of grafting upon stocks that were themselves diseased, or were of a different habit of growth from that of the graft itself.

His third illustration is with reference to the cereals, which, he contends, have been rendered by high cultivation, subject to the attacks of various insects—"the Midge, the Hessian Fly, the Army Worm, the Glut, and the Cut Worm." It is scarcely necessary to expose the fallacy of such reasoning as this. Of course, if we did not cultivate the cereals at all, insects could not prey upon them; but, as this cultivation is a matter of necessity, we naturally have to contend with the evils that follow in its train. If we planted no corn, the crows could not destroy it; but does anybody imagine that if there was no corn, there would be no crows? If there were no cereals cultivated, would the insects that prey upon them die out? The cultivation of the cereals did not create insects—they must have lived and fed upon other things when the land was a sylvan wilderness, and before the plow turned the first furrow in its virgin soil.

But Mr. Cope finds that the native vine is remarkably long lived; that it covers in some places the tops of the tallest trees, and that its vigor is due to the fact that it has never undergone cultivation. To a certain extent that may be true; but as a practical question it has nothing to do with the subject. The wild vines, though of extraordinary extent and circumference, bear, in proportion to their growth, the smallest possible quantity of fruit. It would be difficult to gather from a Fox grape, a century old and seventy feet in height, a bushel of fruit. Now, the object of cultivating the grape, is not only to improve its quality and flavor, but also to increase its productive capacity. If we leave it in its natural state we cannot do this. We must be content, instead of feasting on the luscious Isabella, five feet in height, and breaking down with the abundance of its fruit, to put up with scanty and indifferent supplies—to be gotten at only by tall climbing—of its vigorous progenitor the Fox grape. We prefer, and incline to believe that our readers prefer likewise, the more luscious Isabella, even though its term of life may not extend to more than thirty years, whilst that of the Fox grape, from which it originally sprung may reach a hundred. So much for Mr. Cope's theory.

His suggestions in regard to the propagation and cultivation of the vine, are, however, in the main sensible and judicious. They are as follows: "If you want healthy vines, such as your children and great-grand-children, as well as yourself, may eat the fruit of, procure the seeds of good healthy grapes that you think suitable to your locality. Plant them in a pot filled with

good garden soil. When two years old, set them out where they are to remain. Train them against the side of a house facing the east or south-east—against any other building—a wall—along a trellis, or on a fence. Never cut off large branches. If any small ones show signs of weakness take them off in the fall.—Pinch off any sprouts that may arise, either from the root or main stem, after the fruit has set. Let the leaves alone, they will drop off time enough. Train up but one main stem. Divide and spread the branches annually in such a way as to give the whole the benefit of air and light as much as possible. About every third year, remove the surface soil, and replace it with a compost of lime and leaf mold, in proportion of one-eighth of the former to seven-eighths of the latter." **PEACH CULTURE.** Mr. Cope's practical advice is evidently much better than his theory. He trains to one stem; he prunes; he pinches off; he fertilises. We call this cultivation. He calls it nature's method.

PEACH CULTURE. This fruit, as a general thing, receives but little attention—and in fruitless seasons, none at all. This is a great oversight. When the tree is loaded with fruit it requires nearly all the sap to make the crop, and very little, if any, to spare in the growth of the stem, and healthy, vigorous branches; and unless the tree has been previously well treated, after the crop has matured, the tree gives evidence of exhausted strength, and frequently droops and dies, and the tree is decreed as short-lived and unworthy of cultivation. But in a fruitless season, the tree having no burden to bear, the ascending sap has a fair chance to renovate the body and push out new shoots—then every cultivator should lend a helping hand to the laudable effort of nature, by removing old, dead, sickly or puny limbs; cutting, pinching, or rubbing off all superfluous shoots, leaving such only as may be necessary for raising a future crop; shortening them back, so as to prevent a further extension after the beginning of August;—in order that the sap, thus checked in its ascent, may commence its elaborating process in perfecting the new branches, swelling out the dormant fruit buds, and throwing back its surplus upon the stem or body, forming new roots, and new wood upon the stem, increasing its diameter, and almost rejuvenating the tree; and at the close of the season it will be found rejoicing in its strength, ready to stand the blast of winter, and perform its whole duty in the coming season.

All those who have observed at all, have noticed the number of little dead shoots in the spring, often upon young and thrifty trees; these are the superfluous growths after the commencement of August, and should have been removed, for the same reason that a surgeon amputates a mortified limb to save the body.

PEACH BORER. This is a potent enemy to contend with. This borer, grub, or worm, operates upon the roots and collar of the tree; that is, just where it

emerges from the earth, and if left unmolested destroys the tree. Its presence is generally indicated by the gum, but not always so. Operating under the bark, the tree is sometimes nearly girdled and destroyed before the cultivator is apprised of this depredator. Hunt out this villain early in the spring. First remove the earth from the trunks, search for his entrance, follow him up; get him out, cut his throat, then scrape out his filth, and apply fresh dirt; and in order to prevent a return of this enemy or any of his breed, about the first of June remove all weeds and grass, and apply one-half bushel of fresh stable manure around the body, about three inches deep at the tree, and sloping outward. This will prevent the moth from depositing the eggs, which produce the borer, and in September dig in the manure around the tree, and annually repeat the application, always previously examining lest some sly rascal should have made a lodgment, or eluded your spring examination. Don't think the job too hard, as a man who is willing can operate upon a hundred trees a day.

I am indebted to Mr. W. Kaye, late of Louisville, for the above essay and certain remedy. I have tried it frequently and each time found it effectual, and when I neglected it found myself the sufferer, as I did this spring, in consequence of being necessarily absent from home.

The late Col. James Allen, of Nelson County, one of the most practical men I ever knew, had another remedy—he removed the earth with a wooden paddle, sought out the grub and applied soft soap, made thin with lye.—[*Samuel Haycraft, in Ky. Farmer.*]

[Reported for the Valley Farmer.] Moramee Horticultural Society.

EUREKA, 4th July, 1861.

The thirty-first monthly meeting was held in the house of Dr. J. B. H. Beale. The President in the chair.

The minutes of the former meeting were read and approved. Two new members were admitted.

The Corresponding Secretary reported having received from the U. S. Patent Office several packages of Wheat of the following varieties: Noe Wheat from France; Red Wheat from Italy; Poulard Wheat from France; Flint Wheat from Algeria; Chevalier Barley from France; and Spelt from Germany, which were distributed among the members.

The Fruit Committee reported on the table the following samples: Early June and Red June Apples, by P. M. Brown; Early Harvest Apple and Early Golden Apricot, by F. Mesnier; Early Harvest Apple, by T. R. Allen; Early June, by Wm. Harris; Jonetons Apples, of the last and present year's growth, by Mr. Graham; Brinckle's Orange and English Red Raspberries, and Seymour's Seedling Black Currant, by Dr. J. B. H. Beale; Lawton, Orange's Crystal White, and White Mulberry Blackberries, not fully ripe, by J. S. Seymour. The Committee take the liberty of calling particular attention to the Early Golden Apricots, their extreme earliness, inviting color, and fine flavor, rendering them a most desirable article of cultivation. The samples presented were grown upon trees four years from the bud, on the common upland of our district; each of the four trees planted have done well, and borne their proper quota of fruit; they grow as well and seem as hardy as the peach. The Committee also notice the fine condition of the last year's Jonetons by Mr. Graham; the skin

scarcely wrinkled; they were wrapped up in paper, packed in boxes, and kept in the cellar.

J. S. Seymour, Chairman.

The Flower Committee report on the table a beautiful sample of China Rose and Nasturtium, with Rustic Basket Boquet, by Mrs. Dr. Beale; fine, handsome boquet, by Mr. Seymour; fine samples of the Agave, or American Aloe, by Mr. O. Kittredge; and the rare and curious plant *Talium Teretifolium*, found in the neighborhood, by the President. Wm. Murn, Ch.

The Executive Committee reported as the subject for the August meeting, "The Miscellaneous Samples of Fruits, Flowers, and Vegetables that may be on the table on that occasion." T. R. Allen, Ch.

Adopted.

Under the head of Miscellaneous Business, Mr. P. M. Brown gave an account of having counted the stems produced by single grains of wheat, and found great numbers produced one hundred stalks, and one single grain produced one hundred and twelve stalks, each producing a full and perfect ear.

On motion, the meeting adjourned for dinner.

The Afternoon Session was opened by the discussion of the subject for the day—the continuation of "Insects, and the Summer Treatment of Young Orchards."

Mr. O. Kittredge presented a specimen of the apple tree borer, obtained from a tree in his orchard. The trees are from four to six years old. Before coming into his possession the trees had been much injured by the plow and harrow; and two years since, the ground having become very foul, the person in charge concluded to burn up the weeds on the ground, which further injured the trees; many of them died out, and he found many so brittle as to snap over near the ground upon the slightest attempt to bend them; on examination he found the borer very numerous, and the one presented was taken out of a small tree along with five others.

Mr. Votaw had frequently found similar worms in his trees at the surface, and at distances varying to three feet; and adduced numerous instances showing that the summer apples were more liable to the ravages of the borer, and shorter lived than winter varieties. He had used soap as a wash to the stem of the tree; had taken the dregs of the barrel of home-made soap, and never found it injure a tree, but always to improve it much.

The President knows the best fruit growers in New Jersey apply a shovelfull of lime or wood ashes to the stems of their peach trees in May, letting it remain till the fall, and then work it into the ground. Mr. Pell, the great fruit grower on the Hudson river, uses lime and ashes largely. The President washes his trees with a strong solution of soap. He has known of boiling water being poured on the stem of the peach tree destroy the borer without injuring the tree.

On motion, a committee was appointed to report at next meeting on the propriety and details of an Exhibition or Festival of the Society.

The next meeting was announced to be held at the house of Mr. C. Paffrath, at Sunhill, near Melrose, on the first Thursday of August, at 10 A.M.

On motion, the meeting adjourned.

Wm. Murn, Sec.

HOW TO BAKE TOMATOES—Ed. Valley Farmer: As the tomato season is now here, I will give you my method of baking tomatoes. Many persons do not know that they can be used except stewed or raw. I like them better baked, as follows: After removing the skin by pouring boiling water over them, I cut the large ones in two or more pieces, and put them in a baking dish, and season by using salt, pepper, sugar and butter. A little flour and water should be added, and they should be baked in a hot oven for an hour, when they will be found delicious and healthful.

The Apiary.

[Written for the Valley Farmer.]

THE ITALIAN HONEY BEE.

Judging from the interest manifested by inquiries, etc., from all parts of our country, the writer is inclined to the opinion that in a very few years hence the Italian race of the honey bee, if purely and properly propagated, will be more common than the bees of the native race. Should they, on further trial, prove to be of no greater value, aside from their value in solving many ancient and modern theories, than the native race; yet it cannot truthfully be said they have not proved to be a valuable acquisition to the bee keepers of this country.

By the introduction of the Italian race into this country, a new and apparent impetus has been given to bee culture. Although the new and manifestly improved system of bee culture which was first originated in Europe by the Rev. Mr. Dzierzon, and in America by the Rev. Mr. Langstroth, would alone ultimately revolutionize the culture of the honey bee; yet this result will the sooner be accomplished by the introduction of the valuable Italian, as it will serve to create an additional interest.

As it may be of interest to many to know the modus operandi of disseminating the Italian race, and one of the safest methods of introducing the queens into native colonies, allow me to make a few brief remarks on each of these topics:

It is, at present, the better way for such as design to commence the propagation of the Italian bee, to procure, at first, only a queen. The queen is impregnated, and consequently fertile, before she is sent away by the propagator. As one impregnation is usually operative for life, all of her progeny, provided she has been fertilized by an Italian drone, will be purely of the Italian race.

When the Italian queen is to be sent away, she and a few hundred workers are confined in a small portable wooden box. In this box is a small movable frame filled with comb, which is supplied with sufficient honey to last the colony from one to three weeks. The frame is so secured in the box as to be stationary. The colony, when thus prepared, may be safely sent by express to any part of the country, provided the point of destination be not too distant to cause their starvation, nor the weather of such a temperature as to cause their destruction.

When the box with the queen is received by the person to whom it may be sent, he should then remove the native queen from one of his best colonies, in case she has not been removed at some previous time. The native colony should remain queenless about eight days. In a short time after the native bees have ascertained their loss, which generally occurs in from fifteen minutes to one hour after her removal, they will commence constructing royal cells, which will contain the proper material for queens, to supply the loss of the one removed. Such as are reared in this way, are termed by apiarians "artificial queens." In about eight days after the removal of the native queen, all the royal cells containing immature queens will usually be sealed. When sealed, or nearly ready to be sealed, they can very easily be found. The combs should now be taken out and all royal cells, whether sealed or unsealed, destroyed. Such hives as are provided with Mr. Langstroth's movable frames, will enable the bee keeper to manipulate with his combs as designated, and destroy with certainty all the royal cells. It is very important that every royal cell supplied with a maturing queen, be removed or destroyed; as, when the proper time to introduce the Italian queen arrives, the bees might not give her the proper kind of reception.

The Italian queen should now be put into a "queen cage." When this is done, care must be taken not to injure her in the least. Take hold of her chest or

thorax with the thumb and finger, or one of her wings, and carefully make her enter the cage. The queen, though possessed of a sting, has never been known to use it as a means of defence except when in combat with rival queens. At least the writer has never known nor heard of its being thus used only on such occasions. Hence the operator should throw aside all fear of being stung by the queen when handling her. Place the cage, with the confined queen in the top of the hive between two frames of combs occupied by bees, so that they can feed her and cultivate her acquaintance. Let the cage thus remain about thirty-six hours that the bees and the queen may become alike scented and acquainted, when she is to be released.

To release the queen, simply withdraw one of the combs, without disturbing the cage, which can be taken out of the hive at a subsequent period. The Italian queen will, in the majority of cases, be well received, when given to the bees in the manner and at the time stated.

The "queen cage" may be made as follows: Procure a piece of wire gauze about two inches one way, and two and one-half inches the other. Form this piece into a cylindrical tube with an aperture of about five-eighths of an inch. One of the edges of the tube should pass by the other a trifle. Now get a piece of wood two inches long, which will be the length of the tube, and three-eighths inch thick by five-eighths inch wide. Fasten the tube to this piece of wood on the five-eighths inch side. This may be done by driving a small tack into each end. A cork may be used for each end of the tube, to confine the queen, one of which should be of such a size as to admit of its being easily withdrawn when the queen in the cage is to be released. Every bee keeper should have one or more of these cages, as they will many times be found very convenient for other purposes, aside from the one given. Their cost is comparatively nothing, not to exceed from three to five cents a piece.

Middleport, Niagara Co. N.Y. M. M. BALDRIDGE.

THE BATTLE OF THE BEES.

A remarkable battle among bees occurred several years ago at Conneaut, Ohio, and was described in the "Reporter" of that town. The substance of the account is as follows:

Nars Dibble, of Conneaut, has several swarms of bees, about equally divided on the east and west side of his house. On Sunday, August 14th, about three o'clock, the weather being warm and the windows open, the house was suddenly filled with bees, which forced the family to flee at once to the neighbors. Mr. D., after getting well protected against his assailants, proceeded to take a survey, and if possible learn the cause which had disturbed them.

The seventy swarms appeared to be out, and those on one side of the house were arrayed in battle against those of the other side; and such a battle was perhaps never before witnessed. They filled the air, covering a space of more than one acre of ground, and fought desperately for some three hours—not for spoils, but for conquest; and while at war, no living thing could exist in the vicinity. They stung a large flock of Shanghai chickens, nearly all of which died, and persons passing along the roadside were obliged to make haste to avoid their sting.

A little after 6 o'clock quiet was restored, and the living bees returned to their hives, leaving the slain almost literally covering the ground, since which but few have appeared around the hives, and those apparently stationed as sentinels, to watch the enemy. But two young swarms were entirely destroyed, and aside from the terrible slaughter of bees, no other injury was done. Neither party was victorious, and they only ceased on the approach of night, and from utter prostration.

The occasion of this strange warring among the bees is not easily accounted for; and those most conversant with their management, never before witnessed or heard of such a spectacle as here narrated.



[Written for the Valley Farmer.]

USEFUL HINTS.

When perseverance becomes a habit, the success of the individual is secured.

Let not the dyspeptic be discouraged if the best remedies fail him. They only seem to fail. As it takes time to establish chronic dyspepsia, so time is required to cure it. Depend upon it, it cannot be cured by this nostrum or that, nor in a day. On the other hand let not the patient think it incurable because it resists his treatment. It is eminently curable and seldom proves fatal.

Avoid reading much at nights. At first the evil effect upon the eye may not be apparent; but it will soon be manifest, and if persevered in will permanently injure the eye. Remember, the eye is a delicate organ. Like glassware, when once injured, it can never be mended.

Pain is the faithful sentinel of the body, ever on guard, refusing all approaches, even those of its friends. It cries out even against justice, and sometimes thwarts it. This is owing to our selfish desire for ease, which often leads us into vice. The sunny side is not always the best side of life.

To become distinguished we must not only acquire knowledge, but cultivate the instincts of the mind. The man, like the tree, must grow. Some plants (of the mind) must be cultivated; others subdued, as you would in a garden. First, cultivate the mind—its loves, its insight, its relish, its capacity for enjoyment. This will prepare it for the reception of knowledge, which is power. The world is full of material, valuable material, if we would but employ it—and the most valuable perhaps is this: close self-inquiry into the nature of things. This makes the knowledge your own, instead of a mere acquiescence in another's thought. There is that difference between the thoughts which you think, and those of another. Hence, books are only an aid.

"Book learning" is a vague notion as applied to farming. Practical experiment is the only thing that is wanted, whether conveyed through books, journals, or otherwise. Be sure that it is not only experience, but intelligent experience that embraces all the facts. Agriculture is strictly a science, and an extensive one.

It should always be borne in mind that a highly cultivated, rich soil, resists a drouth as well as wet weather. The fertilizing gases act as moisture, and keep the ground in a soft, mellow condition, which again reacts, sponge-like, in retaining the moisture. On the other hand, like a sieve, it lets the heavy rains through, retaining only sufficient for its purposes. To give free play, however, the soil should be deep and rich throughout, or with a sub-soil mixed with gravel.

One of the most beautiful reflections in the whole economy of agriculture, is the thought that the soil holds permanent all fertilizers, till vegetation (that alone) extracts them. They are there for the farmer.

Heat reduces the strength; hence the debility in summer. Remove the heat, and the system resumes its normal condition of strength, which autumn always imparts. As the strength of the system is reduced, so also is the digestive energy in equal proportion; hence, the lack of appetite, and the reduction of the system in summer. Avoid, therefore, as much as possible, black or dark clothing, which absorbs the rays of the sun. It is on this principle that a white horse endures more than a black one in hot weather.

In watering gardens, an incredible amount of ignorance is prevalent. Light watering cannot be too highly reprobated, especially when practiced daily. It affects only the surface, imparting a hard coat to the ground, but never penetrating to the roots. Just now there is any amount of ignorance in practice. These people are preventing even a decent shower from penetrating the crust they are making. The true method is, to water thoroughly. This will have the effect of a thorough shower, which we all know needs not to be repeated every day. In the severest drouths, thorough irrigation once in five or six days, is sufficient. But the ground must be wet throughout. Plants of slight rooting should be attended to oftener.

Our happiness and length of life are much depending upon our stimulant capacity. This capacity may be exhausted in half the usual time if strongly and much exercised. Lord

Byron had exhausted sixty years in thirty—a fact he put on record. But this in abuse of power; and its condemnation is found in the decrees of nature. Artificial stimulants, therefore, are pernicious, as they prematurely wear out the system, and also blunt the faculties of enjoyment.

It is no doubt true that each fruit in its season, may be eaten with advantage by the inhabitants of the locality. Hence, the various berries and fruits are not only grateful, but their sub-acids counteract the influence of the heat, while their aperient principle relaxes the bowels, which then suffer most. There is less nutrition here, but more medicine; and it is the latter that we now need—need as accompaniments to our more hearty food. But fruit should be ripe—bear that always in mind. Lettuce, as used, is grateful and cooling; but its narcotic influence is objectionable. A counter influence is needed in summer; coffee answers that purpose, but is apt to be used too much, when the system can least bear the stimulus.—The sugar used with coffee is also objectionable in summer, when acids should come in play.—With less sugar, coffee, when taken occasionally—say two or three times a week—is beneficial, as it rouses the torpid energy without prostrating the system. Coffee taken with lettuce is hardly palatable. Onion is stimulating, and, used with vinegar, answers a good purpose—but used to excess, as is sometimes done, it wears out the activity of the stomach. But its taint is an objection, and to some seems to have a poisonous base. Let the garden and the orchard, then, be laid under contribution; and avoid fat meats, especially old, hard-fried pork, a thing unfit at all times to eat, and particularly in summer. People, then, are invalids, more or less, and need care in their diet.

F. G.

The easiest way to get over an affront is to forget it; the noblest to forgive it.

Every year that glides over our heads is a land-mark—a moss-covered milestone—on our journey to another land.

A noted philosopher being asked by a friend how he kept himself from being involved in quarrels, replied: "By letting the angry person have it all to himself."

Fun is the most conservative element of society, and ought to be cherished and encouraged by all lawful means. People never plot mischief when they are merry. Laughter is an enemy to malice, a foe to scandal, and a friend to virtue.

HOME CONVERSATION.

Children hunger perpetually for new ideas, and the most pleasant way of reception is by the voice and the ear—not the eye and the printed page. The one mode is natural, the other artificial. Who would not rather listen than read? We not unfrequently pass by in the papers a full report of a lecture, and then go and pay our money to hear the self-same words uttered. An audience will listen closely from the beginning to the end of an address which not one in twenty of those present would read with the same attention. This is emphatically true of children. They will learn with pleasure from the lips of parents what they deem it drudgery to study in the books; and even if they have the misfortune to be deprived of the educational advantages which they desire, they will grow up intelligent if they enjoy in childhood and youth the privilege of listening daily to the conversation of intelligent people. Let parents, then, talk much and talk well at home. A father who is habitually silent in his own house may be in many respects a wise man, but he is not wise in his silence. We sometimes see parents who are the life of every company which they enter, dull, silent and uninteresting at home among their children. If they have not mental activity and mental stores sufficient for both, let them first provide for their own household. Ireland exports beef and wheat, and lives on potatoes; and they fare as poorly who rearve their social charms for companions abroad, and keep their dullness for home consumption. It is better to instruct children and make them happy at home, than it is to charm strangers or amuse friends.—Make home, then, a cheerful and pleasant spot. Light it up with cheerful, instructive conversation. Father, mother, talk your best at home.

HEALTHFUL OBSERVANCES.

Dr. Hall, in his *Journal of Health*, gives the following valuable hints, which if attended to may prevent many cases of sickness and suffering:

1. To eat when you do not feel like it, is brutal—nay, this is a slander on the lower animals; they do not so debase themselves.
2. Do not enter a sick chamber on an empty stomach, nor remain as a watcher or a nurse until you feel almost exhausted, nor sit between the patient and the fire, nor in the direction of a current of air from the patient towards yourself, nor eat or drink anything after being in a sick room, until you have rinsed your mouth thoroughly.
3. Do not sleep in any garment worn during the day.
4. Most grown persons are unable to sleep soundly and refreshingly over seven hours in summer and eight in winter; the attempt to force more sleep on the system by a nap in the daytime, or a second nap in the morning, renders the whole of the sleep disturbed and imperfect.
5. Some of the most painful stomach-aches are occasioned by indigestion; this generates

wind, and hence distension. It is often promptly remedied by kneading the abdomen with the ball of the hand, skin to skin, from one side to another, from the lower edge of the ribs downwards, because the accumulated air is forced on and outwards along the alimentary canal.

6. When you return to your house from a long walk or other exhaustive exercise, go to the fire or warm room, and do not remove a single article of clothing until you have taken a cup or more of some kind of hot drink.

7. In going into a colder atmosphere keep the mouth closed, and walk with a rapidity sufficient to keep off a feeling of chilliness.

8. Two pair of thin stockings will keep the feet warmer than one pair of a greater thickness than both.

9. The night sweats of disease come on towards daylight; their deathly clamminess and coldness is greatly modified by sleeping in a single, loose, long woolen shirt.

10. The man or woman who drinks a cup of strong tea or coffee, or other stimulant, in order to aid in the better performance of any work or duty, public or private, is a fool, because it is to the body and brain an expenditure of what is not yet got; it is using power in advance, and this can never be done, even once, with impunity.

11. The less a man drinks of anything in hot weather the better; for the more we drink, the more we want to drink, until even ice-water palls and becomes of a metallic taste; hence, the longer you can put off drinking cold water on the morning of a hot day, the better you will feel at night.

12. Drinking largely at meals, even of cold water or simple teas, is a mere habit, and is always hurtful. No one should drink at any one meal more than a quarter of a pint of any liquid, even of cold water, for it always retards, impairs, and interferes with a healthful digestion.

13. If you sleep at all in the daytime, it will interfere with the soundness of your sleep at night much less if the nap be taken in the forenoon.

14. A short nap in the daytime may be necessary to some. Let it not exceed ten minutes; to this end sleep with the forehead resting on a chair-back or edge of the table.

15. Never swallow an atom of food while in a passion, or if under any great mental excitement, whether of a depressing or elevating character—brutes won't do it.

The present annual consumption of cigars on the globe is estimated at the enormous amount of four hundred billions.

The evaporation from the Mediterranean is greater in amount than the volume of water discharged into it again by the rivers and the rains.

A new process of engraving, termed "Chrysotipy," has been invented in France, the object of which is, to transform a plate engraved in the usual manner (*en creux*) into a relief, in which the subject can be printed on the usual printing press, or, as it is usually termed, surface printed.

A GOOD MAN'S PYRAMID.—The following description of the character of a good man, ingeniously arranged in the shape of a pyramid, may be read either ascending or descending:—

TIS STANDING!

With God-like air,
Sublimely fair,
Its fame expanding.
Look on it from afar:
Lo! every smiling star,
To raise the pile to heaven,
Those beauteous stones are given
Each prayer for truth's inspiring light;
Each manly struggle for the right;
Each kindly word to cheer the lowly,
Each lofty aspiration for the holy,
Each strong temptation nobly overcome,
Each clamorous passion in silence dumb,
As slowly it riseth toward the upper heaven,
Stone after stone, unto the mass is given,
Its base upon the earth, its apex in the skies,
The good man's character a pyramid doth rise.

EVERY DAY

Tolling in life's fields and meadows,
To secure the grain and hay;
Sorrow o'er us casts dim shadows,
Every day.
Sweating at the forge and bellows,
For a little earthly stay,
Care has something sad to tell us,
Every day.
Roaming in the fragrant bowers,
Where the songsters tell of May,
Thorns are pricking through the flowers,
Every day.
Time is drawing nearer—nearer—
While our heads are turning grey;
Tears are falling on life's mirror,
Every day.
Time is closing beauty's portals,
Flowers are blooming to decay;
Fate is delving graves for mortals,
Every day.
While our pleasure boat is rolling
Over life's eventful spray,
Funeral bells are tolling—tolling—
Every day.
While the laurel wreath is shading,
O'er this fame-lit brow of clay;
Sad we see the garland fading,
Every day.
Love, then, take your promised treasures,
Fame is dawning to betray;
Life is fading with its pleasures,
Every day.
Muse, hang up your harp and lyre,
On yon weeping willow spray;
Care is eating in the wires,
Every day.
Hence while all things are declaring
Death a seeker for his prey,
Let us be ourselves rejoicing,
Every day.
Highth of coolness—the topmost pinnacle of
Mont Blanc.

Humorous Clippings.

"A little nonsense, now and then,
Is relieved by the best of men."

Those who go to law for damages, are pretty sure to get them.

Provoking—to dream that you have lots of money, and then wake up and find yourself an editor.

Appended to a recent advertisement of a masquerade ball, at Laporte, California, was the following significant notice: "N.B.—Gentlemen and ladies will be required to leave their firearms and cutlery at the door."

(Small boy, on tip-toe, to companions)—"Oh, stop your noise, all of you."

(Companion)—"Hello, Tomms, what's up now?"

(Small boy)—"We've got a new baby, very weak and tired; walked all the way from Heaven last night; mustn't go kicking up a row round here."

"Mother," said a little boy the other day, "I know what I would do if I was at sea, and all the men were starving, and they should draw lots to see who should be killed and eaten, and it should come to me: I'd jump into the water."

"But," said the mother, "they would soon fish you up." "Ah," said he, "but I wouldn't bite?"

After a certain military company had dined, and their commander thought a longer circulation of the glass might tend to prevent the regularity of their return, he exclaimed, jocosely, "Attention! charge bayonets!" to which one of the company gravely replied, "As we are in the rear rank, if you please we will remain at port."

A Western editor and his wife were walking out in the moonlight one evening. The wife was of an exceedingly poetical nature, and said to her mate: "Notice that moon, how bright and calm and beautiful." "Couldn't think of noticing it," retorted the editor, "for anything less than the usual rates—a dollar and fifty cents for twelve lines."

A colored firm in Newark, New Jersey, having suffered some pecuniary embarrassments, recently closed business, and the senior member gave to the public the following:—"Notis: De disbolution of coparanips heretofe resisting twixt me and Mose Jones in de barber profession, am heretofe resolved. Pussons who ose must pay in the scriber. Dem what de furn ose must call on Jones, as the firm is insolved."

"My dear husband," said a devoted wife, "Why will you not leave off amoking? It is such an odious practice, and makes your breath smell so." "Yes," replied the husband, "but only consider the time I have spent to learn to smoke. If I should leave off now, all that time and money would have been wasted, don't you see?"

The customers of a certain cooper caused him a vast deal of vexation by their saving habits, and persistence in getting all their old tubs and casks repaired, and buying but little new work. "I stood it, however," said he, "until one day old Sam Crabtree brought in an old bung hole, to which he said he wanted a barrel made.—Then I quitted the business in disgust."

"My friend," said a hotel-keeper to a voracious boarder, "you eat so much, I shall charge you an extra half dollar." His boarder replied, with his countenance the very picture of pain—"For goodness sake don't do that! I'm almost dead now, eating three dollars' worth, and if you put on an extra half dollar I shall burst."

A bevy of children were telling their father what they got at school. The eldest got reading, spelling and definition. "And what do you get, little one?" the father asked of a rosy-cheeked urchin who, at the time, was slyly driving a nail into the door frame. "Me? oh, I gets readin', spellin', and spankin'."

"So there's another corruption of Mount Vesiferous," said Mrs. Partington, as she put up her specs. "The paper tells about the burning lather running down the mountains, but it don't tell how it got afire."

A teacher, one day, endeavoring to make a pupil understand the nature and application of a passive verb, said: "A passive verb is expressive of the nature of receiving an action, as, Peter is beaten. Now, what did Peter do?" The boy, pausing a moment, with the gravest countenance possible, said, "Well, I don't know, without he hollered."

A wealthy owner of real estate was about erecting a splendid house upon a large lot, and was disclosing the plan to a neighbor. "I have employed," said he, "a man which has erected many buildings, and my design is, far to have him erect an edifice with a beautiful Portico in front on the street, and a Pizarro behind, with a bath house contagious!"

There is a good deal of sound sense at times in the remarks of insane persons. At a lunatic asylum, a few days since, a patient was asked if he was fond of riding horseback. "No, sir, I ride a hobby." "There's not much difference between the two," carelessly remarked the gentleman. "Oh! yes there is," said the patient; "and it is this: If you ride a horse, you can stop him and get off; but when you mount a hobby you can't stop, and you can't get off."

"I love you like anything," said a young gardener to his sweetheart, pressing her hand. "Ditto," said she, returning the pressure. The ardent lover was sorely puzzled to understand the meaning of "ditto." The next day, being at work with his father, he said: "Daddy, what is the meaning of 'ditto'?" "Why," said the old man, "this here is one cabbage head, ain't it?" "Yes, daddy." "Well, that ere's 'ditto.'" "Drat it," ejaculated the indignant son, "then she called me a cabbage head!"

Domestic Department.

TOMATO CATSUP—CEMENT FOR FRUIT JARS.—In reply to a query by a correspondent of the "Rural New Yorker," the following replies were furnished for making Tomato Catsup:

By Mrs. Holt: Take four quarts of tomatoes; one of vinegar; four red peppers; three tablespoons of salt; two of black pepper; two of allspice; one of cloves; three nutmegs. I boil my tomatoes as long as I can and not burn, and then strain through a flour sieve; add one pint of vinegar and boil down again, then add the other pint of vinegar with all the other articles, and boil down as thick as I can. If it is boiled sufficiently (as it is the boiling that makes it keep well) it will keep three years if made right.

Another, by Mary A. Land: Heat the tomatoes, then squeeze them through a sieve. To six quarts of the pulp and juice add three quarts of the best vinegar, set it over a slow fire to boil, and when it begins to thicken add half an ounce each of cloves, allspice, and pepper, one-fourth ounce of cinnamon, and two nutmegs, all finely powdered; boil it to the consistency of thin mush, then add four tablespoonsfull of salt. When cold, bottle and seal it. This should be boiled in a porcelain kettle, or removed from brass to tin before the salt is added.

Another, by Anna Bodine: Take good ripe tomatoes, steam them till done, then squeeze them through a colander, all but the skins; boil the juice till quite thick, then add a quart of good vinegar to four quarts of juice, put in pepper and salt and spices to suit your taste.

FOR CEMENT.—Take one pound of rosin to an ounce of tallow, and melt together.

THE CURATIVE EFFECTS OF GRAPES.—Dr. Herpin, of Metz, has published a very interesting account of the curative effects of grapes in various disorders of the body. They act, firstly, by introducing large quantities of fluids into the system, which, passing through the blood, carry off by perspiration and other excretions, the effete and injurious materials of the body; secondly, as a vegetable nutritive agent. Employed rationally and methodically, aided by suitable diet and regimen, the grape produces most important changes in the system, in favoring organic transmutations, in contributing healthy materials to the repair and re-construction of the various tissues, and in determining the removal of vitiated matters, which have become useless and injurious to the system. Directed by a skillful physician, this valuable curative agent can be made to produce the most varied effects on the constitution. It also possesses the advantages of being acceptable to most invalids. The treatment lasts from three to six weeks. The quantity of grapes that may be consumed varies from one to four pounds a day, commencing with small quantities, which are gradually increased. The skins and seeds must not be swallowed. In the absence of grapes, the most beneficial effects may be obtained from dried raisins, provided a quantity of water, sufficient to satisfy the thirst they excite, be taken at the same time; or they may be stewed in the same manner as prunes.

CHEAP BEER.—A very good, palatable, wholesome beer, may be obtained from acorns and hops. It is slightly sparkling, eminently tonic, and a febrifuge. The acorns are steeped in water for fifteen or twenty days, the water being renewed four or five times; they are then transferred to a cask, hops are added, the cask filled up with water, and the bung hole lightly covered, but not stopped, as there is an escape of gas. In fifteen or twenty days the beer is fit to drink; and as fast as it is drawn off, fresh water may be poured on. The cost is less than 10 cents per gallon. It would supply four or five persons for eight months with a very excellent beverage.

BAKED TOMATOES.—Tomatoes peeled and baked on a hot dish, as we bake apples (or even baked without peeling), and when done seasoned with salt, butter and pepper, is a luscious way of preparing this excellent fruit.

TO MAKE TOMATO WINE.—Take small, ripe tomatoes, pick off the stems, put them into a basket or tub, wash clean, then mash well, and strain through a linen rag (a bushel will make five gallons, pure), then add two and a half or three pounds of good brown sugar to each gallon; then put into a cask, and ferment and fine, as for raspberry wine. If two gallons of water be added to each bushel of tomatoes the wine will be as good.

TO MAKE CIDER WINE.—Seeing an inquiry for making cider wine, I send my recipe. Let your elder ferment, then heat it till it boils. Skim it, and add to each gallon of cider one pound of sugar, and one pint of whisky. To give it a high color, boil in the elder a small bag of dried black raspberries.

HOW TO HAVE SWEET BREATH.—It is the easiest and simplest thing in the world to have, at all times, a sweet, inoffensive breath—aye, sweet as the breath of a new-born babe. In the first place, keep a clean mouth, which is easily done by having all decay removed, and by the use of a good tooth-brush, with a little soap and water, night and morning. Common toilet soap will do, but castile soap is preferable, as it is more strongly alkaline, and contains less impurities. The teeth are decayed and filled with tartar, and discolored by the acids and vitiated secretions of the stomach and the mouth, which may be perfectly counteracted and cleansed away by soap, which is alkaline. If the breath is made offensive only by the teeth, an observance of these directions will thoroughly and surely eradicate it. It may be necessary to go elsewhere for the cause; where it is very frequently found, to the stomach. If so, it may be readily corrected by proper dieting. If the breath is bad from this cause, the tongue will be found coated, the stomach oppressed with, perhaps, heart-burn and acid eructations. Correct it by leaving off all diet of indigestible character—cut off one-half the quantity put into the stomach at each meal, and, our word for it, the remedy will succeed most admirably, and you will be blest with one of Nature's greatest blessings, a natural breath.

INK FOR MARKING LINEN.—To make a good ink for printing on linen with types, dissolve 1 part of asphaltum in 4 parts of the oil of turpentine, and add lamp-black, or black-lead in fine powder, in sufficient quantity to render the ink of a proper consistence for the process.

NEW WAY OF BOILING FISH.—The addition of a few herbs and vegetables in the water gives a very nice flavor to the fish. Add, according to taste a little sliced onions, thyme, bayleaf, winter savory, carrots, celery, clove, mace, using whichever of these ingredients you can procure; it greatly improves skate, fresh haddocks, gurnet, &c. Fresh water fish, which have no particular flavor, are preferable done thus, with the addition of a little vinegar. Choose whatever sauces you please for the above fish.

FISH IN OVEN, IN TIN DISH.—A long square tin dish, like those for baking, may be used for this excellent mode of cooking fish, by which all the flavor and succulence of it is preserved. They may be had of all sizes, and at a very trifling expense.

RAILROAD CAKE.—1 cup flour, 1 cup sugar, 4 tablespoonsfull sweet milk, 1 tablespoonfull of butter, 2 eggs, 1 teaspoonfull cream of tartar, half teaspoonfull soda; beat ten minutes, then put in pan, and bake as usual.

Editor's Table.

Subscriptions, &c.

Subscriptions to the "Valley Farmer" are always in order, and, notwithstanding the unhappy times, we are constantly receiving accessions to our list.—Many who had before been engaged in business in the city, have closed up and retired to the country to follow the peaceful pursuits of agriculture, and of course have come to the "Valley Farmer" for advice and instruction. We acknowledge the accession of a large number of this class of readers. Agriculture, after all, is the only stable and safe pursuit. It is least affected by the times. It always affords a support.—There is no chance for any such heavy losses as are suffered in the city. How many residents of the city who have heretofore supposed they were wealthy, have been ruined by the late turn in the commercial scales! A life of poverty is now before them! Had they never forsaken the farm, they would still be comparatively independent.

THE SEASON FOR CROPS.—The season has been very favorable for the production of large crops. We have had just about enough rain for corn, potatoes, &c. to do well. It has been many years since we have had so favorable a season. The crops have generally been harvested in good condition, and the returns have been immense. As matters now look prices will rule low, unless the unfortunate war should soon terminate.

BLACKBERRIES.—Mr. J. S. Seymour brought to our office a few days ago some fine New Rochelle Blackberries; also, some White Blackberries, sweet and of fine flavor, and very agreeable odor, which he calls the White Mulberry.

EARLY APPLES.—The St. Louis market has been abundantly supplied with the Red June, Early Harvest, and Red Astrachan Apples, since the first of July.

SUSPENSION OF THE KENTUCKY FARMER.—We regret to learn, as we do by the last number, that the "Kentucky Farmer," edited by H. Howard Graetz and published by A. G. Hodges & Co. at Frankfort, Ky. has been suspended. This leaves the VALLEY FARMER the only Agricultural paper published in Kentucky. Since we established a branch publication office of our Journal at Louisville, two agricultural journals have been started, and both have ceased to exist. The "Western Farm Journal" started out with the finest appearance of any agricultural journal published; but not meeting with the requisite support, it was bound to suspend; and the "Kentucky Farmer" failing to receive the necessary support to defray the expenses of publication, likewise declines.

We hope the farmers of Kentucky will still rally to the support of our Journal which has stood staunchly by them for the past five years. We can assure them that there is no such word as **ABANDON** in the vocabulary of the "Valley Farmer." For more than twelve

years past it has been ingratiating itself into the good will of the agriculturists of the West and South-West, and has won for itself such hosts of friends that its publication is a source of profit instead of loss to its publishers.

A. GUNTER, 99 Third Street, Louisville, Ky. will be glad to receive subscribers at all times.

CLINTON COUNTY (ILL.) AGRICULTURAL SOCIETY.—The Officers of the Clinton County Agricultural and Mechanical Association, for the year 1861, are as follows: O. B. Nichols, Pres.; Henry Lampin and J. K. Souter, Vies-Pres'ts; C. C. McGinnis, Rec Sec.; Z. Case, Cor. Sec.; John Clabough, Treas.

Our next Fair is to be held Oct. 1, 2 and 3, on our new grounds near Carlyle.

Our Wheat crop is the largest and best ever harvested in the county, by 1 to 1, and No. 1 in quality; and averaging, I think, from 18 to 20 bushels. We sow very nearly all May wheat here. It does not yield so much per acre as other varieties, but matures with more certainty. The Army Worm did not injure our wheat, but destroyed some meadows and corn—on the whole I think they were a blessing to us. Corn, as a general thing, looks healthy, but rather backward; oats tolerable good, late got in; fruit plentiful; garden vegetables plentiful. Wheat 50 cts. per bush.; corn 25, oats 20, and no sale for any of them. Season fine.

Yours Respectfully, O. B. NICHOLS.

The Army Worm.

SHIPMAN, MADDOFF & CO. ILL.

ED. VALLEY FARMER: In the last issue of your valued journal, there is an article in regard to the Army Worm, in which you ask your readers to give you all the information they can in regard to them.

I am not an entomologist—I wish I was. I have been farming more or less in this prairie for sixteen years, and that pest has never troubled me before.—But sixteen years ago I knew the Army Worm to destroy 100 acres of splendid wheat; but that worm was different in appearance from the kind I had on my farm this year. I have different pieces of wheat, and the worm has been in all but one; but think it is not injured more than two or three bushels to the acre. They took off the leaves of the wheat and were traveling to some corn adjoining. I had a ditch made—say 12 inches wide and deep, and straight on both sides; the worms fell in and could not get out, but devoured each other and died in the ditch.

July 4th, 1861. GEO. B. INGERSOLL.

KNOBKOSTER, Mo. May 29, 1861.

ED. VALLEY FARMER: I am greatly annoyed by two or three acres of Burdock around my house, on the top of the Knob. I have cut them down again and again all to no purpose. They seem to grow thriftily, as if cutting them up was a good mode of cultivation. I should be glad to know how to exterminate them. Will you, or some of your readers, give the much desired information. Respectfully,

R. WELLS.

ANSWER: We think if you would cut them off close to the ground, and put a couple handfuls of common

salt on each root, you would get rid of them. Or if you would cut them close to the ground and keep them from making leaves for a year or more, the roots would die; for the leaves are the lungs of plants, and they can't live long without leaves. You might also summer fallow the ground, and thus prevent them from growing for a year, and if there is no seed near your premises you will likely exterminate them. The burdock is a great pest, and should never be allowed to get such a foothold as it has on Col. Well's premises.

THE VALLEY FARMER.—This excellent Journal for the month of June, with its usual variety of agricultural matter, is upon our table. No farmer wishing to conduct his farming in a profitable and pleasant manner should be without this Journal. There is scarcely a number that does not contain some one or more articles upon the subject of farming in some particular manner, or upon the diseases of cattle or stock, or the diseases of certain crops, and the cures for them—a knowledge of which will pay the subscription price of the Journal for several years, in saving the life of stock, curing their diseases, and adopting the modes of cultivation therein recommended. We should be happy to know that every farmer in St. Genevieve County was a subscriber. It contains 32 pages of reading matter, and issues monthly for the small sum of One Dollar. Send in your Dollar to N. J. Colman, 97 Chestnut st., Saint Louis, Mo.—[St. Genevieve Plaindealer.

GODEY'S LADY'S BOOK FOR \$1.—To meet the times, the SIXTY-THIRD Volume of Godey will be sent to subscribers for ONE DOLLAR. This volume comprises the six best numbers of the year, and will contain seven steel engravings, six of the large double extension fashion plates, and all the winter cloak patterns.

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BARNUM'S SP. LOUIS HOTEL.—This popular hotel keeps in full blast notwithstanding the war times.—Indeed, the proprietors, Messrs. Barnum & Fogg, are more untiring than ever to please their guests. This hotel is the resort of the best society, and the best custom in the South and West. The proprietors have a farm of their own, where all kinds of fruits and vegetables are raised for their own use, and which are brought in fresh every morning, and do not have to go through the hands of hucksters and become old and wilted before being used, as is the case with most of our hotels. Every pains is taken to have everything fresh and healthful. The rooms for travelers and boarders are kept neat and tidy, and are well furnished. Indeed it is a luxury to stop at so well kept a hotel as Barnum's, and all our friends visiting St. Louis will find it the best house in the city. It is located at the corner of Second and Walnut, in a central part of the city.

C. M. SAXTON.—The firm of C. M. Saxton, Barker & Co. is dissolved, and Mr. Saxton has become sole proprietor of the greatest Agricultural Book Publishing House in America or the world. Those wanting the best works on Agriculture and Horticulture should send to Mr. Saxton for a catalogue. Any of the books published by him can be sent safely and promptly by

mail to any part of the country. Money cannot be better invested by the farmer than in good agricultural books, to be perused by himself and sons. Farmers sons, by all means, should have access to a good agricultural library. They must have reading of some kind, for the mind craves mental food no less than the body craves material food. If youth cannot have agricultural books and papers to read, they will obtain works of fiction, which will do them positive harm, unfit the mind for solid reading, give it an immoral tendency, and fill it with unholy desires. When a young person becomes addicted to novel reading, useful works become irksome—they have not enough of thrilling descriptions and scenes—they don't fire up the brain sufficiently—they don't draw tears from the eyes, and sympathy for distress, and consequently are too tame to be read. Parents, keep good books for your families instead of such fiction.

HARPER'S MONTHLY.—Harper & Bros., New York, are adding new attractions monthly to their magazine. It is worth to all who read it far more than its cost.—It contains valuable information, and in this respect materially differs from many other magazines. It is splendidly and copiously illustrated. Terms, \$3 per annum. Address Harper & Bros. New York.

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Sept. '60.